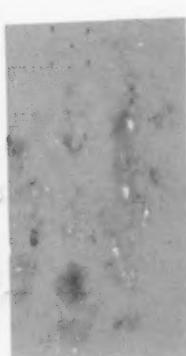


SCHOOL MANAGEMENT

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February 1958



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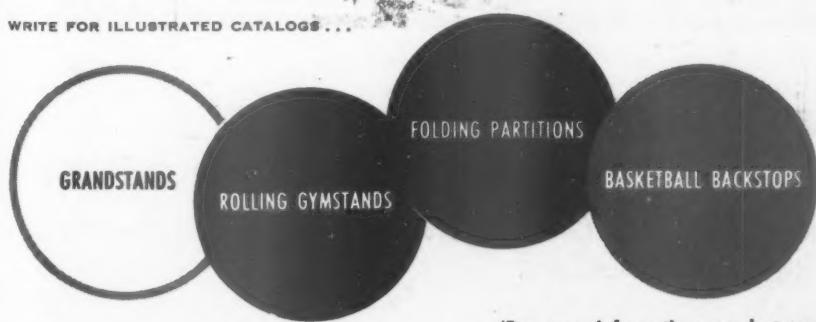
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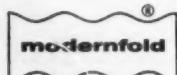


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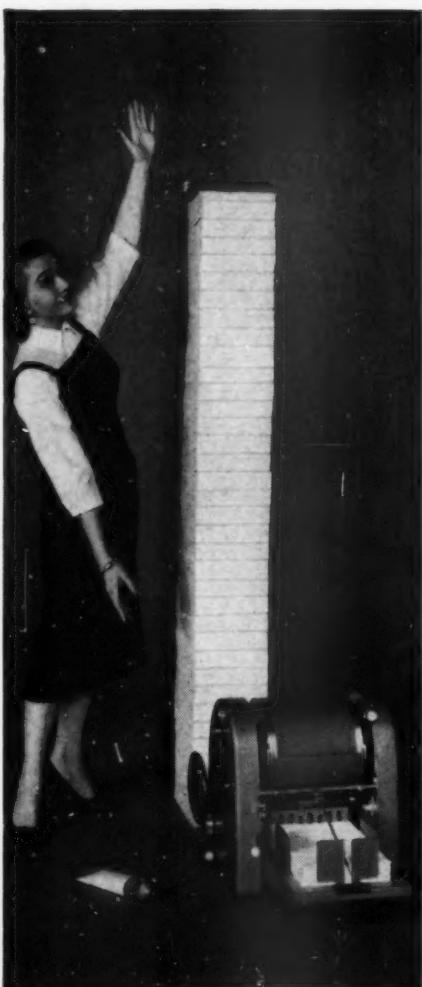
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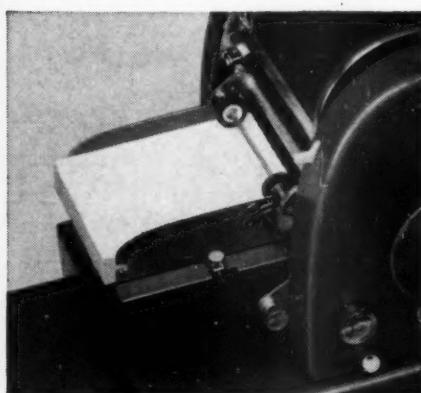
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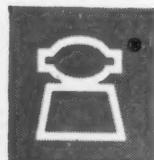
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(The author of the following letter is not a school official but a newspaper reporter who often deals with school matters. We felt that his views on open meetings would be of interest to school administrators. Ed.)

SIR: Reading the letters about open meetings in a recent issue of SCHOOL MANAGEMENT prompts me to write you about how I opened a school board meeting to the press, and why.

As county editor for the *Houston Chronicle* I followed the policy that all meetings of bodies elected by the public were open meetings, open to the press and the public. I knew that there are exceptions—so-called executive sessions—and I gave each reporter, or correspondent, instructions that they were to attend *all* meetings unless the officer in charge told them specifically they were excluded and referred to it as an executive meeting.

In the case of the school district in question, I had no reason to suspect the board was doing anything except efficiently operating its district. On the other hand, I found that members discouraged our reporter from attending meetings, by not notifying her of them.

Keeping public informed

The board was spending about a million dollars a year at that time. It was in a rapidly growing area, with school enrollment increasing 25% to 40% per year. Formerly, everyone knew what was going on or could easily find out from his neighbor. But now the district was becoming too big for neighbors to know what went on. Some formal organization had to undertake the responsibility of keeping taxpayers and other parents posted as to major matters that affect them.

Many administrators and school board members take the position, "If there's something taxpayers and parents need to know, we'll tell them."

I think they are sincere; but as a newspaper reporter covering 23 school districts I found that the standard of "something that the taxpayers and other parents need to know" varies from district to district. One concealed a pending bond issue election in the hope that it was more likely to pass if only a relatively few persons knew about it and no one stirred up issues over it. I sympathized with the bond issue, but could not see how the best interests of any district could be served by concealment of something so significant to all taxpayers.

And so, with the "problem" district, the first thing we did was to have the correspondent spend a little time talking to the superintendent about the district, its achievements and problems. The superintendent talked freely about its qualities, but shied away from even conceding it had any problems.

Meeting dates

The next thing was to get from him the date of the next meeting, and to ask to be invited to all meetings by the process of being notified. The next meeting was held on schedule, and our correspondent had the opportunity to attend.

She did not get a notice of the following meeting, so we repeated the process, again asking for the meeting date. Whenever a special meeting was held, as happened once in a while, she learned about it afterwards, and immediately called and asked the superintendent what had happened at the meeting. The reply usually was that nothing special had happened (yet the board had felt the necessity of calling a special meeting!).

On the day after each meeting I made it my business to publish at least one paragraph about something that had happened at the meeting. I tried to pick the most significant (to the reader) thing that we knew about.

It wasn't too long before our correspondent began to make friends. Members of the school board occasionally called her, and she called them, to discuss school matters of news. However, the process was slow, partly because between council meetings, held on the same night the board met, and lack of notice, she didn't make many board sessions.

Then, two things happened, news-wise. First, our correspondent got wind, from an unhappy parent who called her, of a disciplinary action taken by a teacher which was protested before the board by the parent. Now, such protests frequently lead to the kind of lurid stories that convince all educators that the worst thing that can happen to a school board is open meetings and presence of the press.

Before the meeting, the correspondent discussed the case with me, both as news and as to its effect upon the community. We agreed that the nature of the case was not such as to be worthy news—unless the school board took action of an extreme nature. Although she wasn't notified of the spe-

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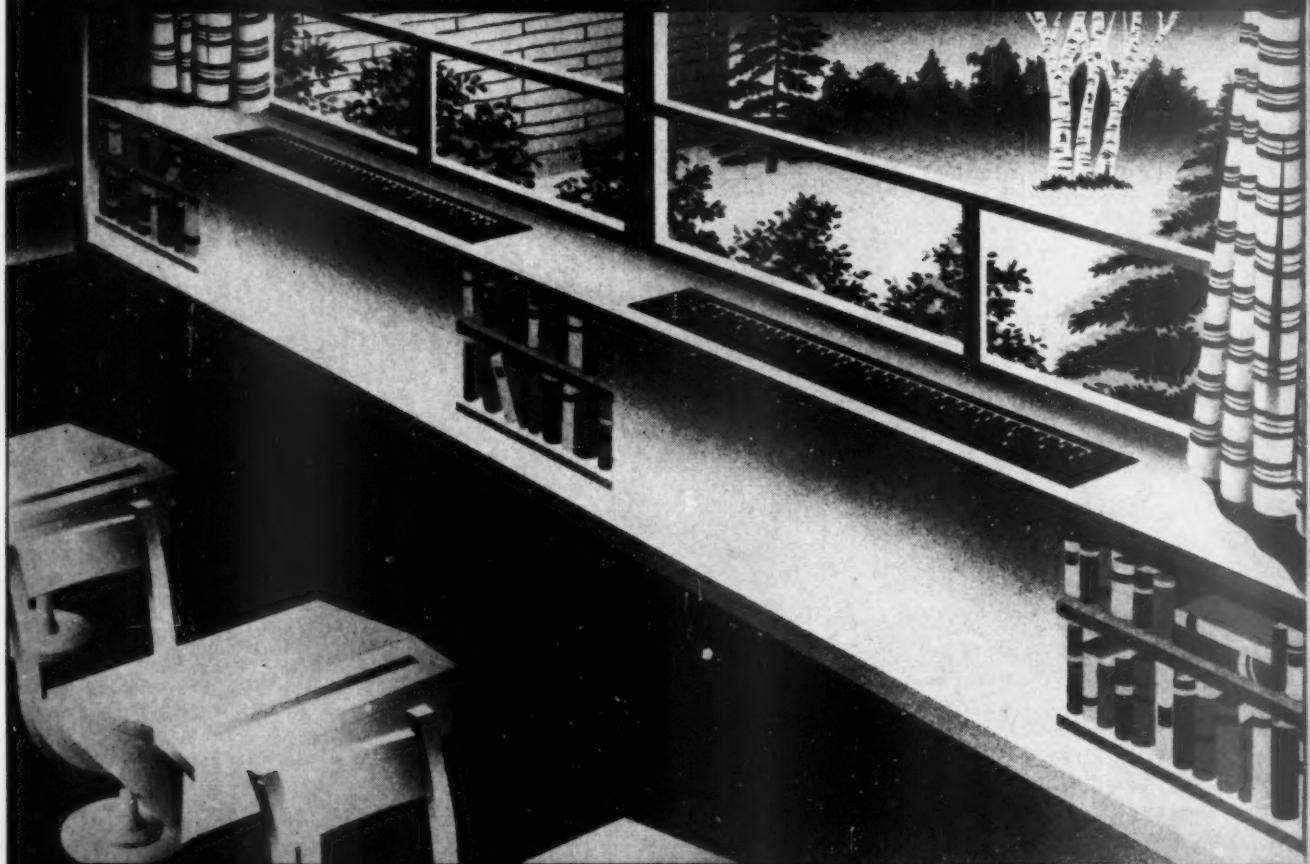
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cial meeting, my correspondent learned about the date and time, and attended. Afterwards, we decided that there was no story in it, and published none. In so doing, we felt the obligation of the press and interests of the public were served.

The second story dealt with the budget. The district is not poor (a major chemical plant and refinery pays nearly all of the tax burden). But the superintendent and some board members felt a little hesitant about attracting attention to the continual rise in the budget each year.

Notice of hearing

My policy every year is to publish the notice of the date of the public hearing on a budget and to describe the proposed budget in lay language. To do this, I published just a few summary figures; a comparison of the total of this year's proposed budget and last year's actual figures, a statement of the difference and, where necessary, a brief explanation of where the increase would go—teacher salaries, debt service, construction of a new school, additional teachers or service personnel. After each budget hearing we published the fact that no one, or almost no one, attended and the amount of the budget approved by the board, plus similar information on the setting of the tax rate.

The board and the administrators, finally accepted this as routine procedure. I think they even liked it!

Since it was a good district, in general, most of the news about it has been good. We did a feature on the unusual summer camp sponsored for one week each for boys and then for girls by the district itself. We did a story about the fine features of a new school. We kept voters posted on the increases in enrollment; and I personally believe this helped assure the success of each bond issue.

This, I believe, is the real meaning of open meetings of school boards. *The public gets to know what they need to know, not in the judgment of the administration, but in the judgment of a quasi-objective person who stands between the board and the public, the free press.*

Some newspapers do abuse the privilege by sensationalizing something that doesn't deserve it. Most often, however, they provide, day after day, the routine information that every parent, every voter, every taxpayer, and every school employee needs to know for . . . intelligent action in connection with his school district.

LOUIS ALEXANDER
COUNTY EDITOR
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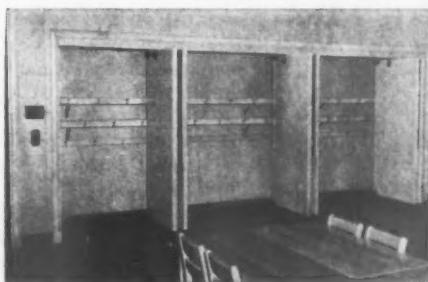
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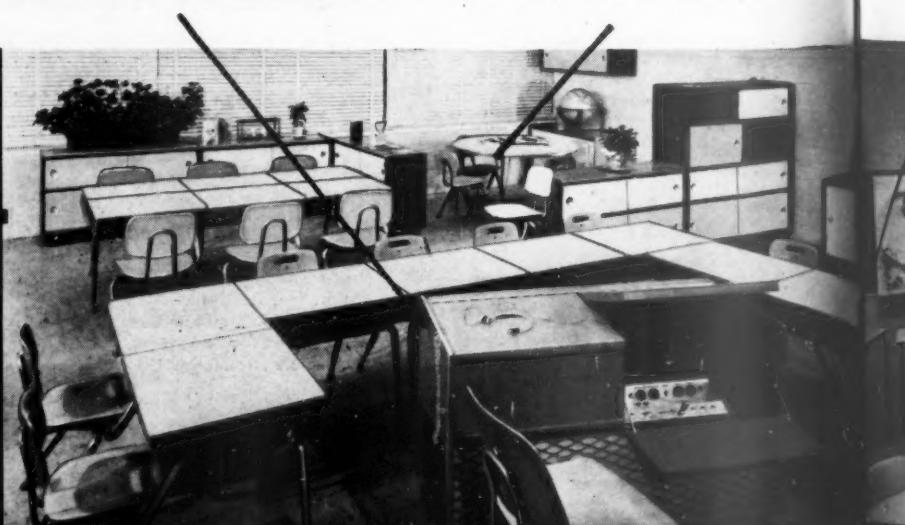
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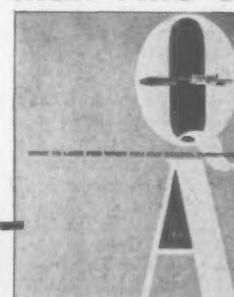
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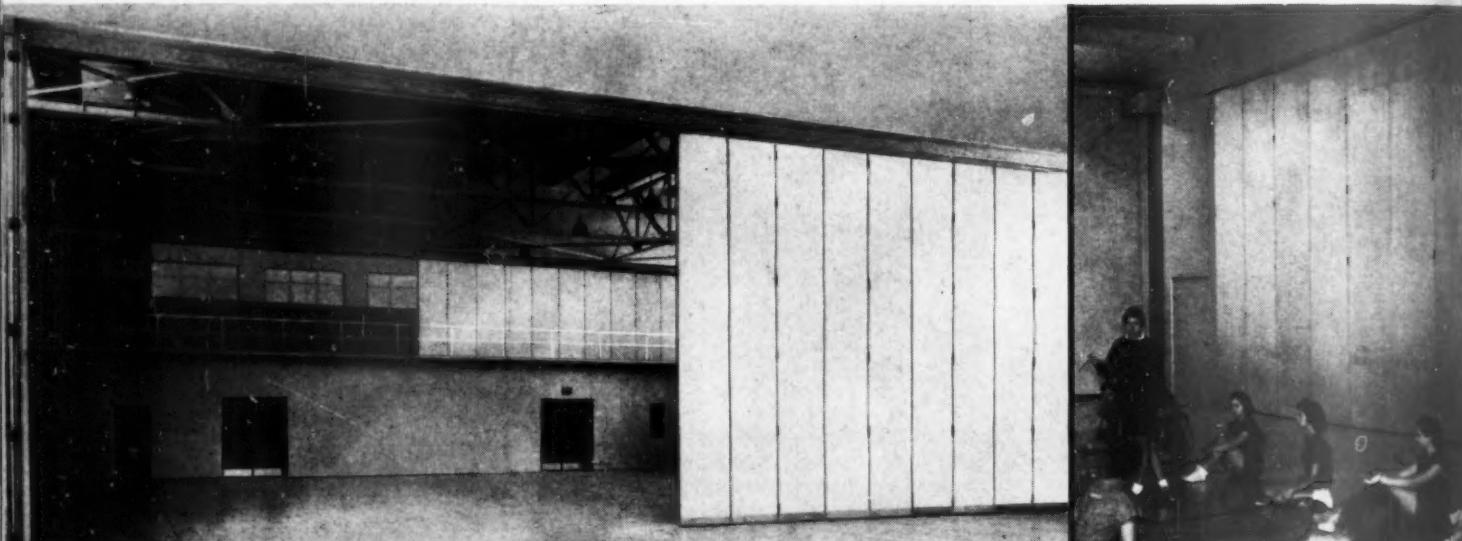
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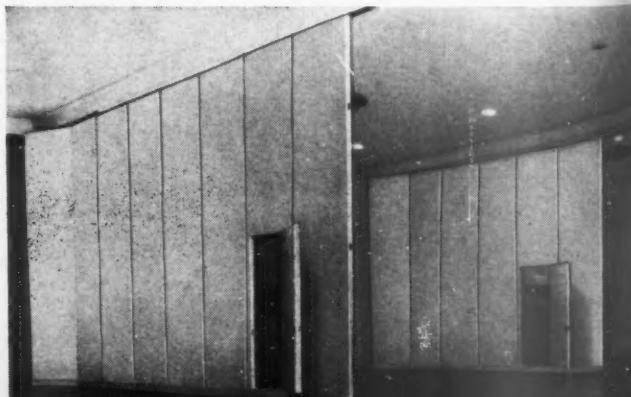
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School building costs lower than average

20-year survey shows that careful planning has kept costs far below those for private homes and other types of building construction.

■ ■ ■ Despite recent charges (page 22) about the high costs of building schools, the fact is that the price tag on classrooms has risen far less than all other construction costs.

As the accompanying chart shows, during the past 20 years construction costs of private homes have increased some 225% and those of all buildings have risen 210%, but in this same period, school building costs have gone up only 150%.

It is only because new school buildings are so different from old-fashioned structures that citizens have jumped to the conclusion that they have become unusually expensive. A study conducted by the American Association of School Administrators, from data supplied by a dozen governmental and trade association sources, reveals that careful planning and much foresight on the part of architects, school boards and administrators proves just the opposite.

Component costs up

This remarkable record has been made despite the constant increase in prices of just about everything that goes into the construction of a school. For example, here are the price increases that have taken place for typical materials, equipment and services during the past 20 years:

Structural steel, 215%; face brick, 200%; common labor, 330%; skilled labor, 220%; over-all materials and components, 200%.

Functional planning has been the key to this record

of keeping school cost increases well below the general level of the construction field. Elimination of unnecessary areas and components has not only served to keep prices down, but has resulted as well in better planned school buildings, where teachers and students alike can do a better job.

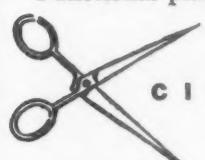
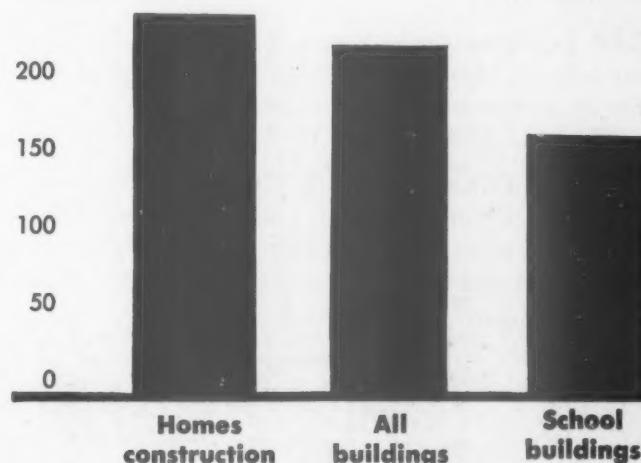
Savings effected

Along these lines, the trend toward single story buildings has effected savings through elimination of costly stairway construction. Corridor space, seldom usable for any real purpose, has been materially reduced. Architectural gingerbread has been virtually eliminated and buildings have been made more adaptable through the use of movable partitions that form rooms of varying sizes as required.

All in all, those who have been responsible for the planning of this country's schools have, through careful study and application, achieved better value for the taxpayer's dollar than is true for nearly any other product or commodity.

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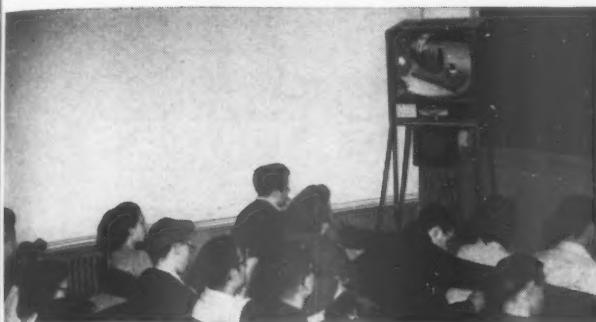
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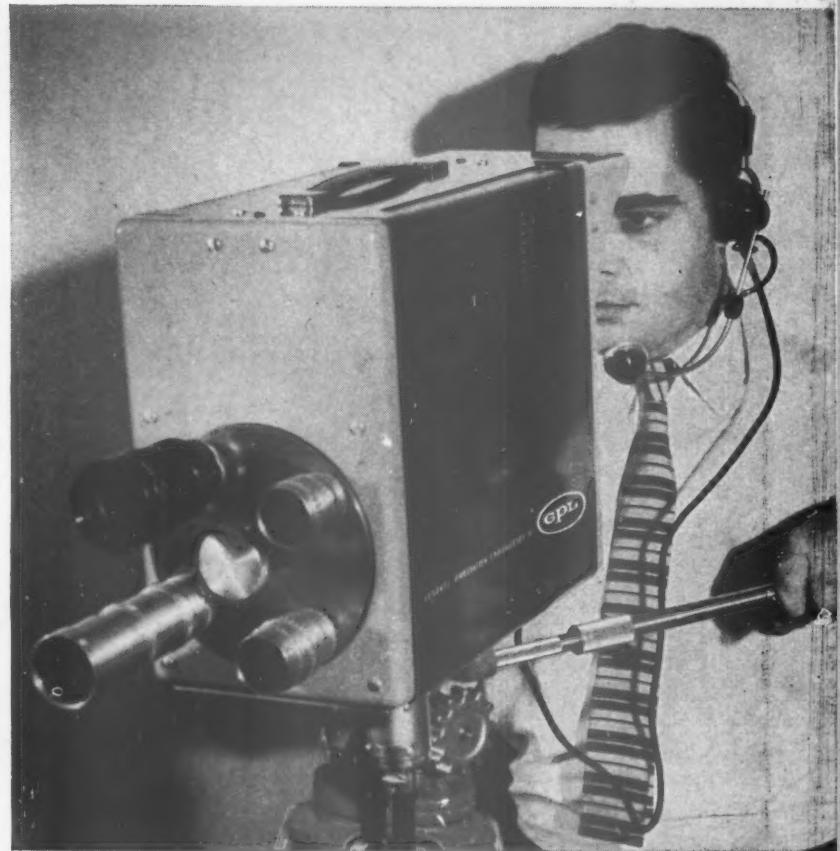
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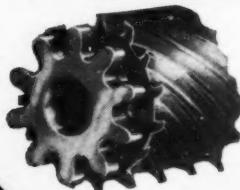
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ADMINISTRATION

Status of superintendents. Employment condition benefits that are today extended to teachers in most communities are not shared by superintendents, most of whom continue to operate in a "statutory no-man's land," insofar as salary, job protection and other such benefits are concerned.

In spite of the fact that smooth operation of a community's educational system depends in large measure upon the superintendent's tact, skill and judgment, his job security is virtually non-existent. This new booklet analyzes the status of the superintendent's employment situation and aims at clarifying some of his problems and bringing about an ultimate change in his status.

SHORING UP LEGAL AND POLICY PROVISIONS FOR THE SUPERINTENDENT. *The American Association of School Administrators, 1201 16th St., NW, Washington 6, D. C. 50¢.*

Administering the schools. A new, extensive report is directed at summarizing major accomplishments directly traceable to the Cooperative Program in Educational Administration and at centralizing information about available publications issued by regional CPEA centers. This 202-page report provides administrators with an opportunity to appraise the impact of the project.

STUDIES IN SCHOOL ADMINISTRATION, by Hollis A. Moore Jr. *Committee for the Advancement of School Administration, 1201 16th St., NW, Washington 6, D. C. Paperbound, \$2.50; clothbound, \$3.00.*

PERSONAL FINANCES

Tax guide for teachers. A step-by-step handbook on the special problems and privileges of teachers in filing their Federal income tax reports has been prepared by the assistant director of the research division of the National Education Association, Madaline Kinter Remmlein. The book,

in addition to discussing certain Treasury department regulations in connection with typical teacher expenses, recommends ways in which school boards and teachers can cope with the resulting problems.

THE TEACHER'S FEDERAL INCOME TAX GUIDE, 1958 EDITION, by Madaline Kinter Remmlein. *Channel Press, 159 Northern Boulevard, Great Neck, N. Y., (paper cover). \$2.00.*

CURRICULUM

Conference proceedings. Late in 1956 a conference on problems of reading in the junior high schools was sponsored by the secondary schools section of the Federal department of education. The proceedings of this meeting, consisting of some 17 addresses and papers, have now been published in book form, together with a bibliography of selected references on the subject.

The material is subdivided under six major headings, including research into the problem, developmental reading, responsibilities for reading instruction, remedial reading, evaluation to improve reading and state activities on this level.

IMPROVING READING IN THE JUNIOR HIGH SCHOOLS. *Bulletin 1957, No. 10, US Dept. of Health, Education and Welfare. Order from Supt. of Documents, Government Printing Office, Washington 25, D. C. 60¢.*

Youth fitness. A representative cross-section of school district superintendents has cooperated with Federal authorities to furnish answers to 10 basic questions on elementary school programs for physical education. A summary of the results is now available in booklet form, based on information supplied by 523 typical American school systems. Detailed tabular matter breaks down the answers to each question by school district size, so that the reader can evaluate the procedures and policies of his own district against the general average for the same size district.

TEN QUESTIONS ON PHYSICAL EDUCATION IN ELEMENTARY SCHOOLS. *US Dept. of Health, Education and Welfare. Order from Supt. of Documents, Government Printing Office, Washington 25, D. C. 15¢.*



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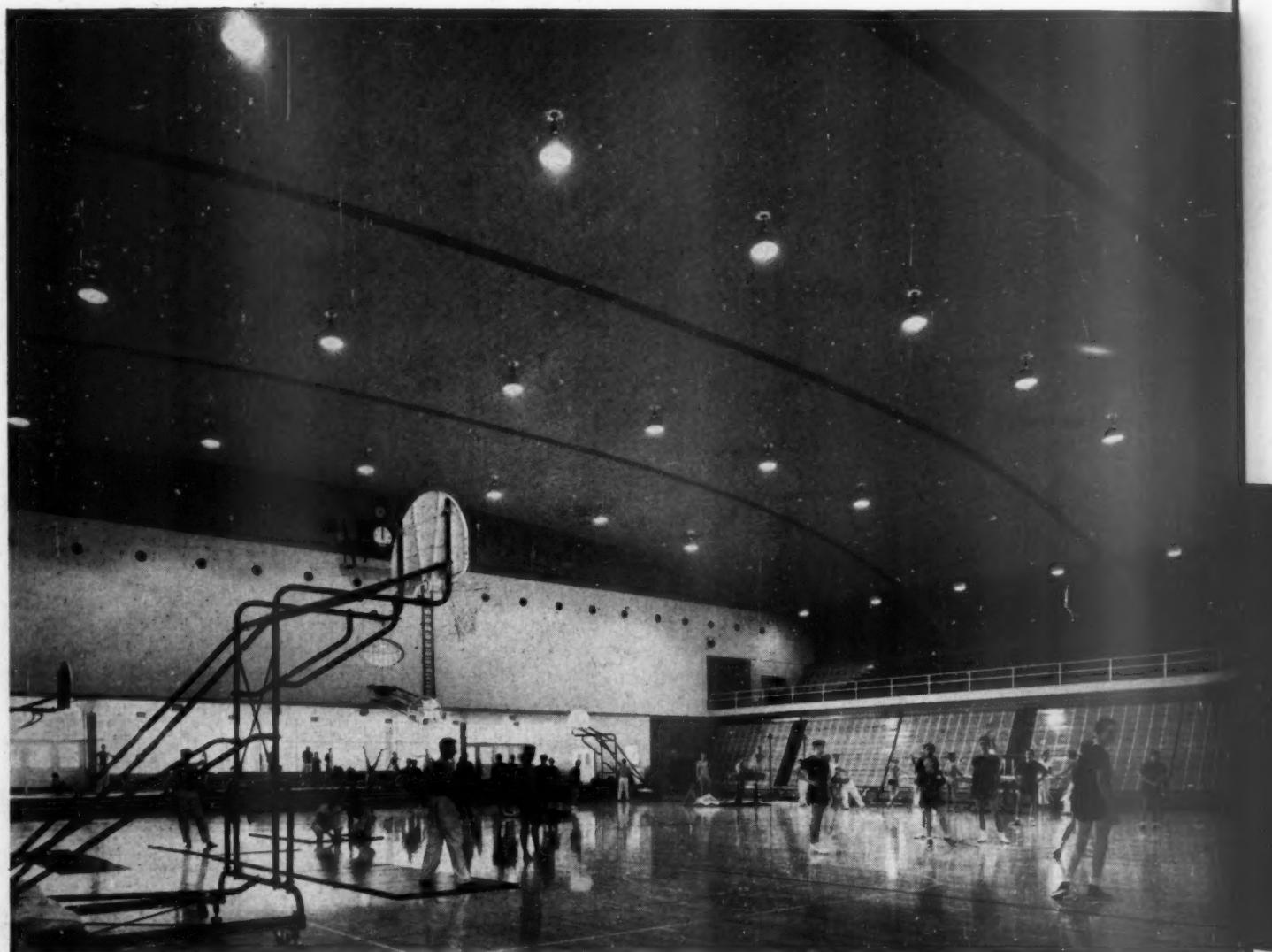
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Catalina High School, Tucson, Arizona

Architects: Scholer, Sakellar & Fuller, Tucson, Arizona

Contractors: L. C. Anderson & J. J. Craviolini, Tucson, Arizona



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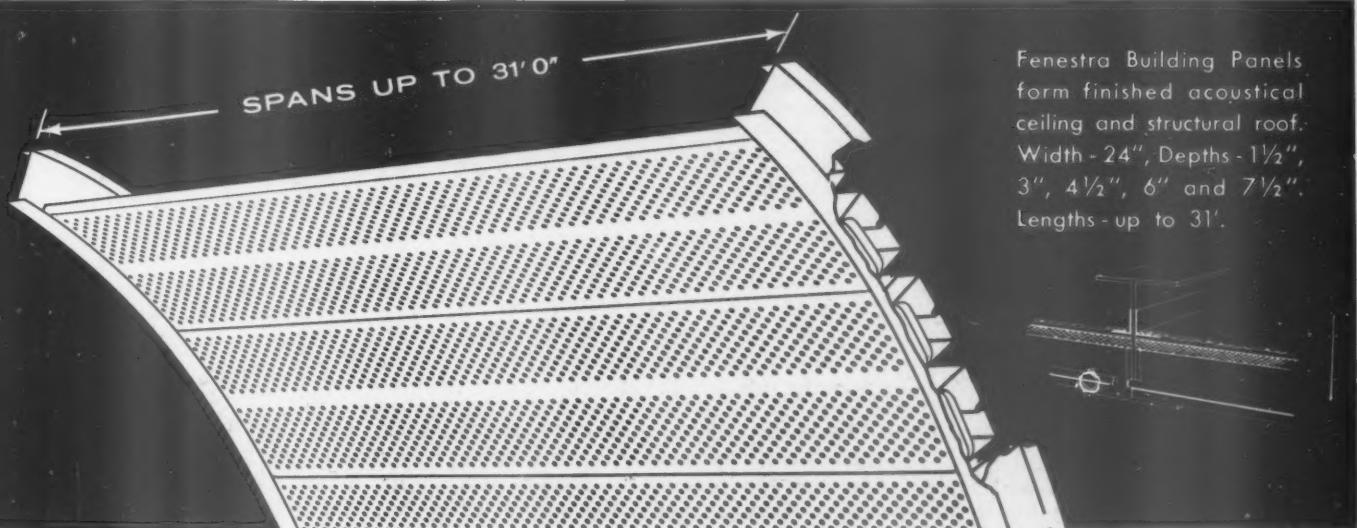
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(For more information, see last page)

NEWS OF THE SCHOOLS

A digest of current happenings in public education

Town runs bootleg class for ninth graders

The Streetsboro school system in Portage County, O., is operating a bootleg ninth grade. It has 45 pupils and meets in the elementary school cafeteria.

Streetsboro has no high school. Its system ends after the eighth grade, but the three area schools that used to take in Streetsboro pupils from the ninth grade won't take any new ones due to their own crowded conditions.

"Technically, the class is illegal," Robert Gregory, principal of the township elementary school said. "The school system is not certified by the state to operate a high school. We requested a temporary charter to operate the ninth grade class, but the charter has not yet been granted and we do not know if it will be."

Neither the board of education nor the pupils know if they will get credit for their work or what they will do when they reach 10th grade.

Consolidation is probably the answer to Streetsboro's problem but when that will happen is uncertain. Meanwhile the bootleg ninth grade continues until the situation can in some way be clarified.

Schools use FM, TV for enrichment

Jefferson County, Ky., schools now have a fully developed FM radio program made available through a co-operative project with the Louisville Public Library. Live TV, broadcast by micro-wave, has also been instituted in three of the elementary schools.

The FM program is available to the 48 elementary schools in the county system, reaching a population of 29,500 children in grades one through six. The program was begun in the county schools in February, 1957. Programming has been written to correlate with the county school curriculum.

The broadcasts are designed as an "enrichment program"—not as a substitute for, or supplement to, teach-

ing. They include topics covered in the entire curriculum. Most, however, relate to social studies, natural science, health and safety, and literature. Each title is a 15-minute tape recording broadcast from the FM station in the Louisville library. Broadcasts are scheduled from 9 a.m. through 2:05 p.m. five days a week with the same title played at the same time each day, thus enabling the teacher some flexibility in making her selections for the week. There is a new schedule each week.

In newer schools equipped with an intercom system the broadcasts are centrally received and piped to the individual classrooms through the loud speaker system. In older schools the programs are received on individual sets in the different rooms.

A committee of three teachers from the county system, hired for a five-week period last summer, previewed all the tape recordings. This committee evaluated each tape for content, selected the tapes to be used, graded

them and wrote the schedule for the coming school term. The schedule showed time, school subject, grade and title of tape, and gave a brief description of the content. A copy is available to each teacher.

A news summary is taped locally each Saturday for broadcast during the coming week. The commentator has had experience in both teaching and commercial broadcasting and is able to present the news in such a way as to interest elementary pupils.

The FM program is under the supervision of O. M. Lassiter, director of supervision and curriculum development. James E. Farmer, assistant superintendent for instruction, is administratively responsible.

The television program, instituted in three of the county elementary schools last fall, was designed as an integral part of the teaching process. It was coordinated with a classroom reorganization program in the three schools for pupils in grades three through six.

Too good to miss . . .

Oswego, N. Y. . . . Vincent A. Corsall, newly elected mayor of this community, has been barred from his job as a science teacher in the city's high school. The Oswego board of education notified the mayor that he could not continue teaching because as mayor he has the power to appoint members of the board.

When Mr. Corsall won his post in the November elections, the board requested a ruling from the state education department. The law division held that there would be "a clear conflict of duties between that of a teacher who is an employee of the board, and that of the mayor, who appoints the members of such board."

Mr. Corsall's teaching post paid \$5,500 a year. As mayor, a part-time job, he will receive an annual salary of \$5,050. He has announced he will fight the ruling in the courts.

Charlevoix, Mich. . . . Student leaders here were instrumental in bringing to an end the practice of senior class trips. They suggested it would be preferable to use the money usually

collected for the trip to make a contribution to the school, purchasing something all could enjoy, such as instructional equipment.

"Today's seniors are just too sophisticated," says Superintendent Roy G. Bennett. "Time was when a June trip to Niagara Falls or Chicago or New York meant something. But the Charlevoix youngster of today is pretty well traveled . . . Taken as a group our seniors have been almost everywhere in the United States, even to Canada and Alaska."

Trips already planned for 1958 and '59 will go ahead as scheduled but none will be made in 1960.

Portland, Me. . . . This city's unusual public kindergarten program for four-year-olds will be discarded if a suggestion made by Superintendent William H. Soule is followed. Because of the city's pressing need for classroom space for older children, Soule has said that kindergarten for the youngsters must be eliminated to make the rooms available for their older brothers and sisters. Kindergarten for five-year olds would be continued.

In each grade there is a regular classroom teacher with about 25 children for three hours of basic uninterrupted teaching. The rest of the day is divided among a creative arts room teacher with about 50 children, a physical education teacher with about the same number, and a resource room which serves as many as 100 children at a time. The resource room offers library facilities, special projects and audio-visual programs; instruction by television is given in this room. Aides are responsible for handling materials, keeping statistical records and other clerical duties.

Programs are live broadcasts originating from a studio in one of the schools and beamed to the others by micro-wave. The telephone company is supplying the micro-wave service.

The project is jointly financed by the Jefferson County Board of Education and the Fund for the Advancement of Education of the Ford Foundation, each paying half of the estimated yearly budget of \$69,380. This budget includes administrative, teaching, and technical costs.

Classes are held in store's windows

Public demonstration of Indianapolis classroom activities, staged in the windows of the J. C. Penney Co. store, in that city during American Education Week, were received so well that plans are already being made to repeat it next year. At that time the 41-ft. long windows will be made three feet deeper to match actual classroom size.

During the demonstration, 14 students were used in each class and eight schools were represented. To prevent fatigue, and to increase the number of schools represented, each class was limited to half a day in the window.

Classes from the third year through the sixth were used in order to show progression. Next year, it is planned to include first grade classes.

A loudspeaker kept the audience informed on what was taking place in the windows. Four microphones were strategically placed in the window classroom to relay the voices of the teacher and the students. It is estimated that 20,000 people watched the proceedings.

"Operation Fishbowl" had excellent coverage by the newspaper, radio and TV, all without urging by the schools. The entire project was carried out without any cost to the local school system. Chalk boards and other needed equipment were furnished by Penney's without charge.

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(For more information, see last page)

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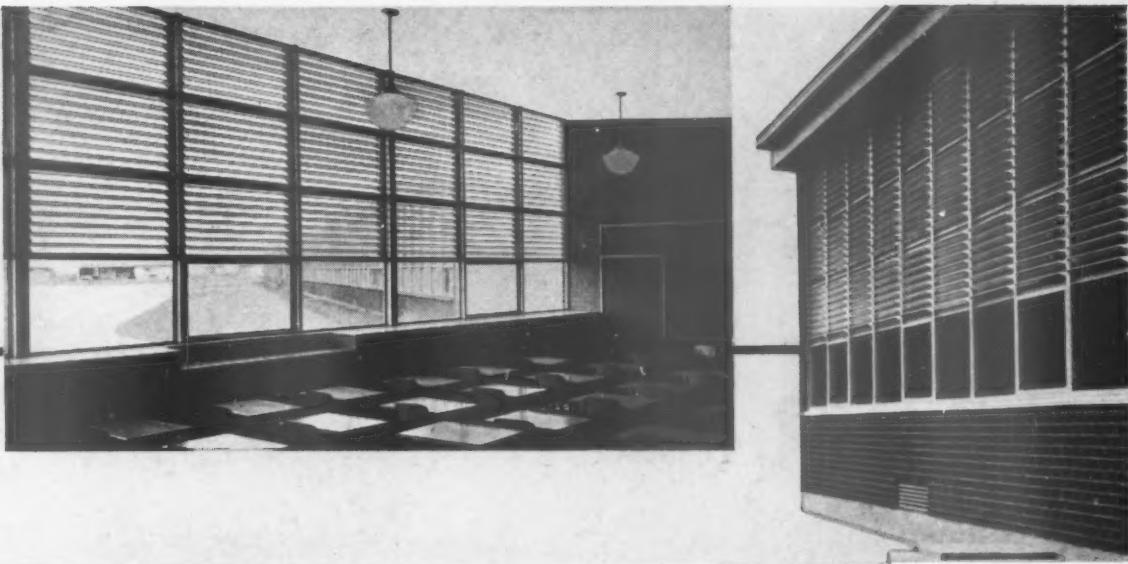
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P7-16

(For more information, see last page)

How Portland handled the Reader's Digest attack

What's the best way to handle a vicious attack on the schools? In Portland, Oregon, a responsible newspaper — aided by educators — has successfully countered the charge that its schools are "costly palaces."

How the local press

By WILMA MORRISON

*Education Editor
Portland Oregonian*

Sometimes a demonstration of the obvious is useful. And perhaps what happened here, *and what didn't happen*, demonstrates a couple of obvious things about school public relations. First, if the community has been kept informed over a period of years, through a completely open school board and administration performance and through a press that has been helped in its effort to report in detail and depth, there is no need to call out the troops when unguided missiles drop in from outside. Sec-

ond, those unguided missiles, in the shape of generalized and undocumented articles in national magazines, set up a defensive reflex action in the local press and among well-informed citizens.

The series of articles in the *Oregonian* (*reprinted below*) did not represent a dramatic marshalling of forces to defend the schools against "attack." The articles were a reporting job such as the *Oregonian* has been doing for years, to the enlightening, or boring, edification of its readers.

■ ■ ■ The September, 1957 issue of *Reader's Digest* carried an article titled "Do our pupils need costly palaces?"

It was a blanket indictment of schoolhouse construction, implying that the cost of building schools was a national scandal.

The fact that the story was obviously biased (and, in some cases, clearly inaccurate) was immediately evident to architects, educators and school boards. But, like Hitler's "big lie," the story found plenty of people who wanted to believe, and others who were impressed by its "documented facts."

Since the *Reader's Digest* publishes some 6 million copies per month, its accusations must be reckoned with. The big question: how to counter them?

There are many ways to "answer" this kind of article, but bitter experience has demonstrated the danger of swinging wildly and fomenting a controversy. When Rudolph Flesch asked "why can't Johnny read" he was aided and abetted by his enemies as much as by his admirers. When Dorothy Thompson dropped her "bomb" in the *Ladies Home Journal*, her limited audience was expanded by the publicity that flowed from the very people who were trying hardest to discredit her.

In other words, a minority position can be strengthened by a running battle.

Still another factor must be reckoned with. We do not have a nationally controlled school system. 50,000 separate and independent school boards provide 50,000 different districts with the educational facilities they want—and are willing to pay to obtain. A "costly palace" in New York State hasn't one iota of effect on the tax rate in Utah.

This last fact would seem to indicate that the "friends of our schools" can best answer *Reader's Digest* by proving that their local schools are consistent with the needs and desires of the people who support them. Why should a Texas superintendent defend a high school built in Kansas—even if it is defensible? *If you must do battle, good sense dictates that you select a field of your own choice.*

Since last September, several excellent answers to *Reader's Digest* have appeared in national magazines. Among the best was the carefully researched rebuttal in *Architectural Forum's* November issue. It is worth reading. But it is not the answer for schoolmen who find their own school districts flooded with reprints of the *Digest* attack.

In the article below we have asked Mrs. Wilma Morrison, education editor for the influential *Portland Oregonian*, to report how her school district met the issue. It offers the only truly effective "solution" or answer to attack—now, and in the future.

reacted in Portland

The series would have been done, anyway, even if the *Digest* article had not appeared. The complexities of modern school construction and finance was one of several subjects in our "must" file, slated for doing whenever the daily grind in the news room slacked off.

The appearance of the *Digest* article, and the one by Dorothy Thompson in the *Ladies Home Journal*, offered a beautiful "news hook" on which to hang (and with which to enliven) a fact-piece that would have been written anyway.

But even the most responsible and school-minded paper isn't going to try to make a bad administration-board performance look good. Nor can it be depended upon to transmit the complications of school business to its readers accurately and interestingly, if it only does it occasionally, and then by dictation. It must have a background of its own knowledge, growing out of long-familiarity with the policies and organizational workings of the school system. Incidentally, there was no local instigation

for our series from the school administration, the board, or architects, though all cooperated by giving me whatever figures and facts I couldn't dredge up from my own years of sitting in on board-administration-architect-engineer hassles.

How the administration acted

On the other hand, the *Digest* article did prompt the administration to take decisive action of another kind. The superintendent's staff quickly put together a film comparing school construction yes-

terday and today. Since the hundreds of local civic and service organizations are always in search of speakers, this film has been seen by all major groups in town.

The administrators who present the film make their own comments brief, and include a frank admission of some of the schools' errors.

I don't know whether the *Oregonian* articles, or the administration appearances, have served to answer questions that would otherwise have boiled up into public demonstrations. I do know there were some letters to the editor protesting building extravagance and

citing the national magazine articles to prove that skulduggery and stupidity are rampant in the schools.

Superintendent J. W. Edwards tells me the film and talk on school construction has been received favorably. Letters and phone calls to the paper about the building series have expressed appreciation for our detailed explanations—particularly those having to do with the discrepancies in square foot cost estimates, cost variations due to building codes, and the dilemma of building expensively for maintenance savings versus building less expensively for immediate savings.

This is not to say that, between the films, talks and articles, we have 100% convinced the Portland public that everything its board does in school construction is correct. I don't think we would even want this kind of uncritical faith. But perhaps the Portland experience does show that—city by city, district by district—these generalized, rather unfair and usually exaggerated attacks on the schools can be countered.

Given the local facts, the taxpayers will generally support their schools. Here's how we presented those local facts in the *Oregonian*:

I

GOLD PLATED SCHOOLS?

Taxpayers study classroom costs

With no leveling off of enrollments or rising prices in sight, the public has every reason for concern about school building costs. A recent spate of magazine and newspaper articles testifies to that concern. But, if the citizen's interest is to go beyond repeating view-with-alarm generalizations, he should get the facts—about his district.

What kind of schools is your district building and why? Are they the "costly palaces" with clock towers, parapets, false chimneys, Greecian pillars and "trim"; or the all-auditorium-gymnasium - and - few - classroom creations which a recent *Reader's Digest* article decries?

Are their plans "dreamed up" by architects and school administrators without much regard for cost or function?

What are valid cost comparisons between different buildings and different parts of the country, and what are the statistical booby traps that make comparisons unrealistic?

Above all, how much of the higher cost of a building is intrinsic in

the materials and design of the building itself, and how much is due to the curriculum which the building must house?

That last question is the stickler for the layman. But, if he is really going to examine school building costs and arrive anywhere except in a lather, he must separate the two things—the design and materials of the building itself, whether they are unnecessarily costly in terms of the functions for which the architects have been asked to plan them, and the other question of the function (curriculum and other uses) that go on in the building.

Building quiz posed

A recent survey by *U S News and World Report*, in which, incidentally, Oregon's average per pupil building cost looks very modest, found great cost differences over the nation. It concludes "The answer in the main, seems to be that it depends upon what the taxpayer wants and will pay for."

When the inquiring school pa-

tron, then, looks to the functions for which his schools are built, he runs head-on into his own and the public's responsibility for what the schools' scope and function shall be.

It is easy to spot a piece of costly decoration—a piece of architectural sculpture, an oversized auditorium, an undersized classroom wing. Deciding whether there should be seats for 1,800 in the gymnasium or whether the gymnasium itself with its lockers and showers serves a dispensable educational function, or whether the high school's role as a social center is good and should be translated into club rooms in the building, is harder to answer.

Another question the taxpayer has to consider if he is seriously appraising whether his district is getting its money's worth in buildings, is the materials used, in terms of their long term maintenance costs. This is a subject that comes up at school board meetings every time a building goes out to bid. Here, as with the size, number and kind of rooms, and the details that go into

A citizen needs to get the facts about his own community

laboratories, classrooms and offices, it is the school administration and business office that make recommendations. They are the ones who offer their experience and opinions as evidence for this kind of floor, that wainscoting, this kind of hardware.

Code dictates design

Finally, there is the city building code that has a considerable effect on the cost and kind of construction in school district No. 1 as compared with schools in outlying areas. Such standards as mechanical ventilating, sprinkling systems even on elementary school stages, fire doors in corridors, fireproofing of steel and of roofs, are a few of what schoolmen say are almost endless requirements in the city that do not apply outside.

The building code, for instance is part of the reason for schools being spread out on one level wherever the size of the site and the moderate size of the student body permits. To go to more than one level requires, it is generally estimated, 25% higher cost because the two level structure must be fireproof steel and masonry construction throughout, instead of the wood frame permitted for one level. It also requires more in foundation building.

This is a dull explanation, of course, by comparison with that of Dorothy Thompson in her widely quoted article in the August *Ladies' Home Journal*. "Must Schools be Palaces?" She says, the new buildings are all on one level because, "Apparently modern teen-agers don't like to climb stairs."

There are several ways of estimating and comparing the costs of school buildings and the commonest one—square foot cost—can be the least reliable for two reasons. It can be, and is, figured many different ways, and it does not allow for differences in the functions of various buildings.

Many believe that cost per student is better because it reflects the function for which the building was designed—the number of students

using it, and the kinds of usage whether it houses a diverse program of shops, physical education, drama, and community activities, or is a stripped-down classroom operation.

One catch in this is that a parochial school that does not meet state teacher-load requirements and runs with 50 in a classroom can show very economical building cost in comparison with those of a public school holding from 25 to 30 per class.

Counts can differ

Another method of estimating cost is on amount spent per classroom. This would be all right if everyone counted the same things. In case of the 14-classroom school costing \$1 million which the *Reader's Digest* article, "Do Schools Need Costly Palaces?" refers to with horror, the author did not count any of the arts and craft rooms, the music rooms, library, remedial reading room, the "meeting room" which is used for classes, nor the shop and manual arts rooms, as classrooms.

In counting classrooms for cost estimates, Portland figures by "teaching stations." For instance, the gymnasium where, by law, all freshman and sophomore students have physical education classes, is counted as four teaching stations. Other parts of the building are counted accordingly, wherever any teaching is done.

Oregon's costs modest

Even by comparison with figures in the most extreme of the view-with-alarm articles in recent popular magazines, Portland's and Oregon's school building costs look modest.

The *U S News and World Report* survey of school costs across the nation lists the average per-pupil cost in Oregon at \$965 as compared with about \$1,350 for both California and Washington, and a high of from \$1,625 to \$1,845 in three New England states. Only some southern states and Maine have lower aver-

age costs. Maine is given at \$878, Arkansas at \$802, Georgia, \$704.

The *Reader's Digest* article cites elementary schools costing \$13 and \$14 a square foot and \$25,000 to \$30,000 per classroom as examples of good, economical construction. Portland's costs average out to approximately these figures on elementary buildings. A majority of the buildings in smaller outlying districts in Oregon figure less than this. They are comparable with the few examples the article gives of extremely low costs (\$7.50 and \$11.80) in Texas, Florida and the Middle West.

No extremes here

As far as can be learned, none of the extreme examples of building waste described in the *Reader's Digest* article are to be found either in Portland or anywhere else in Oregon among school buildings constructed in the last few years. Clock towers, false chimneys 60 feet high, ornamental stone trim, parapets and cupolas, Grecian pillars . . . a \$1 million grade school with only 14 classrooms . . . a \$750,000 gymnasium in a district where elementary children are being double-shifted for lack of rooms—such instances as these are not common to Oregon or, in the opinion of local school heads and architects, common to any other area of the country.

On the other hand, the modular construction buildings designed to be added to as enrollments increase and multi-purpose rooms (combined cafeteria - auditorium - gymnasium) that the article hailed as money saving innovations are things that have been done in Portland and Oregon for many years.

Any figures on school building costs—whether they appear economical or extravagant—should be examined by the taxpayer who seeks to know what his district is getting for its money. Maybe translated is a better word than examined.

A square foot figure may include the full cost of construction plus all
continued on page 67

The pro and con of portable

For three months, SCHOOL MANAGEMENT has been interviewing schoolmen who have had experience with so-called "classrooms on wheels." Here is a close-up of the reactions in four widely separated states—Pennsylvania, Texas, Virginia and California.

■ ■ ■ A "portable classroom" is just what its name implies—a school building that can be moved from one site to another, to meet fluctuating demands for classroom space.

For several months, SCHOOL MANAGEMENT editors have been interviewing educators in various parts of the country about their attitudes toward this relatively new phenomenon in schoolhouse building. Four major case histories, complete with cost figures and the opinions of the users, will be found below.

The reader can judge for himself whether this type of structure is suitable for his school district's needs and tastes. In making such a judgement it is important, however, to keep the following points in mind:

(1) *In not a single instance did we find that portable classrooms had been built solely to save money. The underlying reason was the need for speedy building or the fear of over-building to meet temporary bulges in pupil population.*

(2) *With minor exceptions, most of the schoolmen interviewed considered portable classrooms to*

be a temporary expedient. In no case did we find an educator who preferred a true portable to a conventional structure—although several emphasized the virtues of a "decentralized" bungalow-type school plant spread out on a campus plan of smaller buildings.

How the portable works

Most portables are small units that can be moved on wheels by a commercial house mover. Others are built of prefabricated elements that can be "de-mounted" and reconstructed on another site.

It is important not to confuse the portable buildings with so-called "bungalow schools" found in many parts of the country, particularly California. The bungalows are *permanent*. In many areas they look like the portables—hence the confusion.

Wherever the portables have been built, a certain amount of public controversy has followed. For example, last year, when the board of education of Los Angeles authorized construction of enough portable buildings to end half-day sessions within one year, the "crash program" was hotly contested.

PORABLE

classrooms

CLASSROOMS

Several board members called it a "cracker box building program." Other taxpayers—particularly the economy-minded—were enthusiastic. Surprisingly enough, educational administrators and teachers have not taken a strong position on either side. Their position is one of caution as they weigh over-crowding against portable facilities.

There is still another position stated by one of

the schoolmen interviewed last month. "It will take several more years for this experiment to be properly evaluated," he said. "I recommended it because our permanent building program was falling way behind our school enrollments. Thus far, it looks like a smart move, but you can't say I'm impartial. I told you I recommended these portables—so I'm looking for their virtues more than their faults."

Philadelphia says: "56 classrooms built . . . plans to erect 18 more"

Philadelphia builds its portable schools for \$10,000 to \$12,000 per classroom. On the average, furnishings cost about \$700 per room more. Thus, at relatively low cost, the city is providing desperately needed classrooms which Associate Superintendent Milton Pearce terms "comparable by most educational standards with any conventional structure."

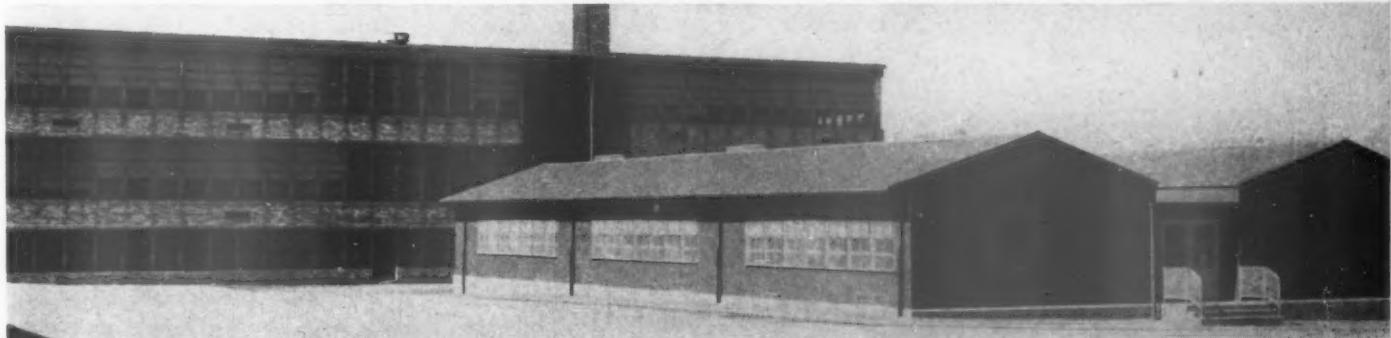
Says Pearce, "We are using portable classrooms only in those sections of the city where the increase in pupil population has been so

great *and so sudden* that it has outrun the established school accommodations. Their great virtue lies in the fact that they can be erected speedily." A typical six classroom portable goes up in only three to four months. Invariably, they are situated in a school yard, close to the permanent building (see photos). They are used only for elementary school space.

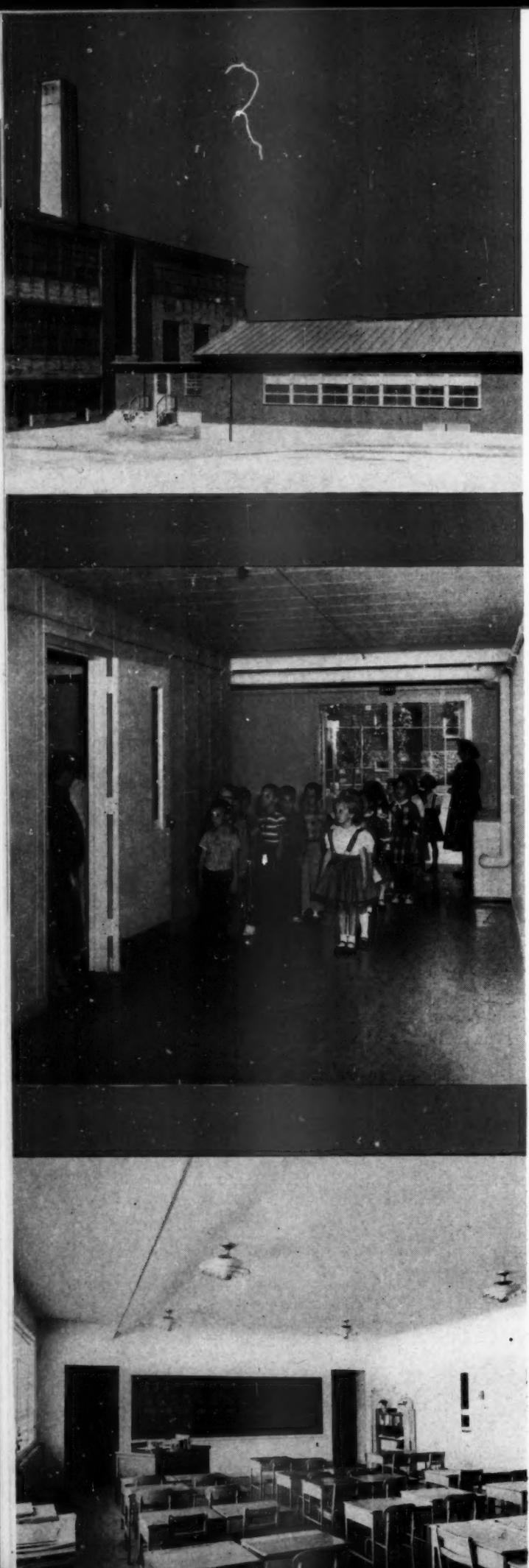
Most of Philadelphia's portables have six rooms, three to each side of a double-loaded corridor. Smaller units have also been built where

yard space was insufficient for a larger structure. Pearce emphasizes that the buildings are "temporary so far as location is concerned," although no attempt has been made, as yet, to test their portability. The manufacturers supplying the buildings claim they are 90% salvagable. Pearce says, "My own feeling is that this is a generous estimate, and I would hazard a guess that 75% would be more nearly correct."

Instead of dealing directly with the producer of the buildings, Phila-



Twelve classrooms are provided in two six-room portables set up in this Philadelphia school yard. The buildings, placed on concrete foundations, are kept close to the permanent structure. Philadelphia authorities have not tried to move buildings to new sites but estimate that they would be 75% salvagable.



"We are using portables where population growth has been great and sudden."

adelphia asks local builders to bid for the opportunity to put up the portables. The manufacturers then try to sell to the builders their own product.

The 56 classrooms built so far have been supplied by the Armco Co. Plans are under way to build 18 more.

The length of enclosed passageway from the portable to the main building is the chief factor in determining the final cost per classroom, and accounts for the \$2,000 spread. All of the buildings are heated from the main plant of the permanent school. Most of the furnaces have the necessary additional capacity. In a few cases, where the existing structure had been added to before the portables were installed, additional heating capacity was needed.

Associate Superintendent Pearce reports that school principals and special subject supervisors have expressed pleasure and satisfaction with the portables. He adds that teachers appear to like them, too.

But there are self-imposed limitations, Pearce admits. None of the buildings have toilet facilities or program bells. These have been omitted in the interest of economy and to underline the essential "temporariness" of the structures. Some few of the portables have no covered passageways, an obvious inconvenience. These handicaps are outweighed, Philadelphia feels, by the avoidance of overcrowding and double sessions, and by the savings inherent in their low cost and apparent durability.

EXTERIOR

This Philadelphia portable is attached to the main building by a covered passageway. City regulation requires that rooms be no closer than 30 feet to permanent school.

CORRIDOR

Double-loaded corridors are broad, cause no traffic problems. Moveable interior partitions make it possible to form rooms.

CLASSROOMS

Room and light are more than sufficient in this portable classroom, one of six in the building. Chalkboards are on two walls and windows line a third. Pupil's clothing is stored in closet at left, rear.

Dallas says: "Portables are the answer to booming enrollment and over-building"



MOVING DAY

Dallas brings its schools to the children, meeting enrollment problems wherever they arise.

Dallas public school officials say they have won the race with booming enrollment and their key to success is a small army of classrooms on wheels.

Schools on the move—throughout the 256-sq. miles of Texas' second largest school district—have solved the problems of classroom shortages, half-day sessions, extended school terms and top-heavy pupil teacher ratios.

Since World War II, Dallas public schools have had no half-day sessions, and the student-teacher ratio has steadily improved each year to reach the current average of 31 students per teacher.

Dr. W. T. White, superintendent of the Dallas Independent School District, gives credit for this achievement to a collection of 300 frame classrooms which have been Dallas' answer to swelling enrollment.

Between the time officials find the need for a school in a particular area and a permanent brick building is completed there, the temporary classrooms fill the educational needs. Thus, temporaries have become Dallas' permanent answer to averting a shortage of classroom space.

The story of Dallas' use of rolling classrooms really begins in 1945-46 when 6,500 children started using them. Enrollment in the portables climbed steadily, reaching a peak of some 12,000 students in 1954-55. For the past three years, that enrollment has declined rapidly to the present 7,300.

Dallas' portable schools can be moved on a day's notice to meet enrollment demands anywhere within the sprawling districts. Dr. White said he knows of no similar operation in any other school system in the country.

Designed by H. B. Burford, the system's maintenance agent, each frame room is 22 x 30 ft. with 10-ft. ceilings and composition shingle roofs. They are built of fir and yellow pine with two entrances in each unit. Each has six ceiling lights, five windows and two transoms.

The temporaries are constructed for \$3,500 each by the system's maintenance crew and are set on the preferred sites in precast concrete foundations. They require repainting about once every three years.

Every unit meets the sanitary and physical requirements for good

teaching and some of the rooms have been wheeled around to serve as many as 10 campuses.

In addition to portable classrooms, there are temporary principal suites, secretarial rooms, clinics, bookrooms, restrooms, closed and open corridors and milk bars.

This spring, \$12,355 was spent by the system to relocate the temporaries—about 2% of the cost of an elementary school.

Help control over-building

The reasoning behind the use of temporaries is explained by Dr. White this way: "Dallas' acceleration in birth rate and move-in population gave us a choice of providing either quick housing or half-day sessions. We chose quick housing. We soon learned to build the temporaries in single units so that one truck could move one schoolroom.

"As we discovered new communities springing up—some in six months due to rapid expansion—we bought new sites ahead of the development and when enough children could be counted to justify a new school, we set up a cluster of portables.

"Of course, we didn't want to

spend the taxpayer's money for a permanent school until we were sure the children would need a school in that area for a long time. When certain of this, we assigned an architect and within 18 to 20 months a permanent school was finished and the temporaries moved to another new site."

By "breaking ground" with the temporary classrooms, Dallas school

officials never make the mistake of constructing a permanent building where it will not be needed for scores of years.

Schools on wheels also are used in Dallas to supplement permanent school needs in instances where a high concentration of families with children of the same age level move into an area. After absorbing the swell in enrollment for a few

years, the portables are moved when the permanent building can again handle the normal enrollment. This saves wasting money to build permanent additions which would not be needed after the children grow up and out of school.

What it boils down to is that Dallas' temporaries are "insurance" against errors in long-range construction planning.

Fairfax County, Va., says: *"Not as good as permanent construction."*

Fairfax County, Va., found that demountable classrooms were not a quick and inexpensive answer to their problem of housing skyrocketing school population.

The school board, eager to keep pace with an annual increase of 5,000 youngsters, authorized the classrooms as a time-saving experiment in the hope of finding quick, economical relief from rising enrollments and crowded classrooms.

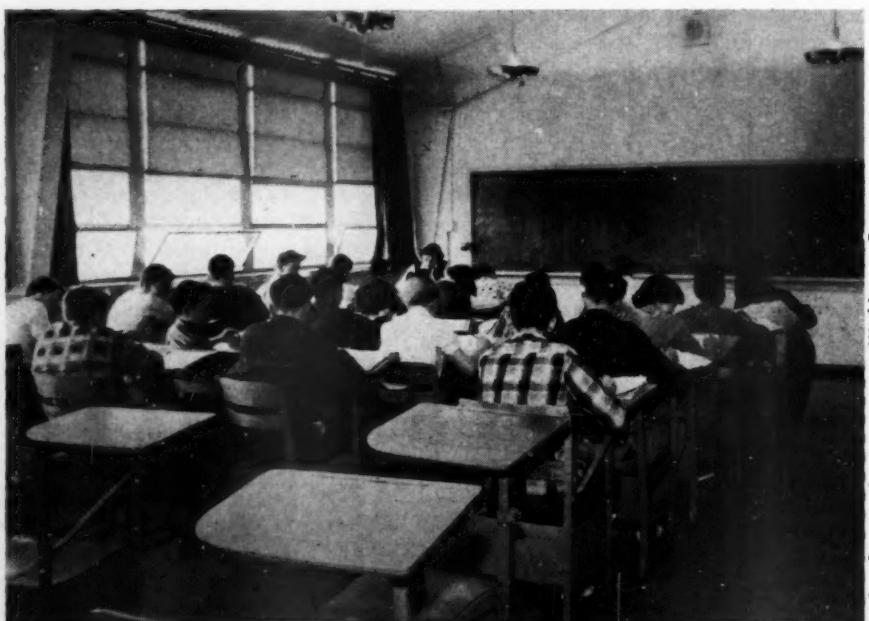
Board members hoped to use the classroom units in conjunction with existing school buildings as stop-gaps in congested areas while they

kept moving forward with a multi-million-dollar permanent construction program. They planned to move the demountables to pressure spots as the need arose.

They authorized two demountable units, at a cost of nearly a quarter of a million dollars. In their case, they found that the buildings not only cost more than conventional construction but took just as long to build and could not be readily moved to new locations.

The decision to try the demountables was preceded by considerable study and discussion.

McLean high school in Fairfax County, Va., uses a five-classroom portable to relieve overcrowding. Building has heating plant, janitor's room and bathrooms.



Fairfax County pictures, courtesy Washington Post

Several members of the board, with architect Earl Bailey of Arlington, traveled to Norfolk to observe portable classrooms used in that area.

In addition, Bailey was asked to make a study of various prefabricated and portable structures.

Architect says "no"

The architect wrote to the boards of education in several other localities that had had building problems. In an eight-page report to the school, he concluded that "a premium must be paid for portability."

Bailey said portable buildings are more costly than permanent buildings of the same quality. He said they also prove expensive because of the materials wasted when moved and because of the cost of labor in dismounting and reassembling them. He said the "stock steel buildings, except where brick and stone are used for the walls, are unattractive and temporary-looking, and the brick and stone walls are definitely not portable."

He said the only advantage to "acceptable prefabricated building" is the speed with which they become usable.

The quest for speed spurred board members to move forward with the demountables. Even if the pilot project took a while, they reasoned, a succeeding unit could be built faster with experience.

The board was anxious to rid the county of tar paper buildings and
continued on page 71

HOW TO

REDUCE

MAINTENANCE

Accurate
determination
of costs

COSTS

Efficient
equipment



The most vulnerable item in your school budget is maintenance. Yet few schools have attacked this item with a scientific approach. Here's a simple method that schoolmen can borrow from business, plus practical suggestions on how to get started.

■ ■ ■ Maintenance costs run to at least 5% of the average school's annual operating budget. True cost accounting might bring this figure even higher.

Yet, despite this substantial expenditure by every school each year, until recently progress in this field has not kept pace with the amazing advancements that have taken place in business and industrial situation.

The job of emptying a wastebasket or of cleaning a floor remains today essentially the same task that it was 20 years ago; but steadily rising costs mean that a community is now paying up to five times as much to get that same job

done as it did years ago. From 1936 to 1956, for example, the cost of cleaning one square foot of interior surfacing rose from 15¢ to 55¢.

It has been estimated that even if your school were to be given all of its cleaning equipment and supplies free of charge, your community would save only 10¢ on each dollar currently expended for maintenance, since 90% of such costs go into labor charges.

Realization of facts like these has led to a new approach to the problems of school maintenance: "measured work techniques" aimed at scientific evaluation and control of cleaning and maintenance costs.

There are two kinds of maintenance—1) routine, day-to-day work and 2) capital investment for modernization and major repairs or rebuilding. This article deals with the first factor.

An examination of a typical budget for a school district of 1,200 students underscores the care with which analysis of maintenance and cleaning costs must be undertaken. The district in question has budgeted for the current year some \$94,000 under two headings: operation of school plant, about \$70,000, and maintenance of school plant, about \$24,000.

Yet each subdivision includes



HOW TO CALCULATE "HOURS PER SQUARE FOOT PER YEAR"

1. Calculate total annual cleaning payroll, including all fringe benefits, uniform costs, etc.
2. Total up the number of square feet to be cleaned.
3. Divide (1) by (2) to obtain annual cleaning cost per square foot.
4. Calculate average annual hourly wage.
5. Divide (3) by (4) to obtain "hours per square foot per year."

Example:

1. Annual cleaning payroll ..	\$63,500
2. Total number of square feet	140,000
3. Annual cost per square foot	\$0.454
4. Average hourly wage	\$1.10
5. Hours per square foot per year41

some costs which should be charged to cleaning and maintenance, and many which should not. For example, of the \$70,000 allocated for "operation," there are items of \$40,000 for custodians' salaries and of \$5,200 for janitorial supplies. The "maintenance" section of the budget lumps repairing of furniture and apparatus with replacement of those same items, with no indication of how much of each is for maintenance and how much for purchase of new items.

Accurate costs needed

The first step therefore in measuring the efficiency of your school's cleaning and maintenance operations is to arrive at an accurate determination of their costs. And, since 90% of these are payroll charges, it follows that calculation of annual payroll cost for maintenance of a square foot of school becomes the basic figure affecting evaluation of over-all cleaning and maintenance costs.

Arriving at this fundamental figure is a simple arithmetic calculation:

1. Add total wages (including overtime) and total fringe benefits (including payroll taxes, uniform costs, vacation and sick leave pay, insurance, etc.).

2. Determine the total number

of square feet in your school requiring any kind of cleaning service, regardless of frequency.

3. Divide the total annual cleaning cost (step 1) by the number of square feet to be cleaned (step 2). The result is your school's annual payroll cleaning cost per square foot.

It is not practical to try to assess the efficiency of your own operation by trying to compare it with similar costs you may know about in other schools. *Individual buildings vary too greatly to make such a comparison of any value.* Such factors as a difference in standards of quality, methods used to calculate total square footage, the proportion of problem areas requiring unusual time applications, and the kind of work carried out in various areas of different buildings nullify the value of such comparisons.

For example, one study carried out in a group of office buildings revealed a difference of almost 20% in hours spent on cleaning each square foot per year among the different structures. Maintenance engineers call this measurement of *hours per square foot per year* "the most accurate unit of measurement" since it provides you with a basic measurement device that reflects your school's true payroll costs.

The hours per square foot per

year figure can be calculated from the total annual payroll cost per square foot, already arrived at. All you need do is to divide the figure by the average hourly wage of your cleaning and maintenance personnel. (See box.)

Inaccurate method

While the number of square feet to be serviced by any one individual worker has long been the standard used in equalizing work loads, it is apparent that this method is not a very accurate one. In fact, it seems to have developed solely because maintenance managers haven't been able to find any other means of evaluating work loads.

But the more modern approach calls for a detailed time and method study of the work assigned to each man. Of course, the number of square feet of surface for which a man is responsible continues to be a factor, but it should not be the principal method of determining proper distribution of work among the members of the maintenance staff.

It seems clear that variations in surfacing materials, the placement of plumbing, lighting or heating fixtures, frequency of cleaning needs and other like variants tend to make the proper maintenance of one locale more time consuming than some other location of equal area.

Consequently, it is necessary to make a total over-all study of work loads and their time requirements in order to assure equal distribution of work among staff men. This in turn will lead to more efficient cleaning, better morale among the personnel involved and lower costs. One case study showed a 25% reduction in annual cleaning costs, following a work load study and a subsequent reassignment of tasks.

Work loads, in turn, must be based upon a realistic evaluation of the amount of time it takes an "average" man to do a specific cleaning or maintenance job. By totalling the number of minutes it should take an individual workman to accomplish the jobs assigned to him in a given day (adding sufficient time for gathering and replacing equipment), it can readily be seen whether all members of the maintenance staff have been assigned work loads of reasonably equal time length.

How to measure your men

For this purpose, sanitation engineers have evolved standard time periods for specific maintenance jobs. (See box.) Based on these standard times, it may be found, for example, that one worker has been assigned tasks that will occupy him for only 316.75 minutes of his normal 420-minute day, while another maintenance man might be found to be loaded down with assignments that, if properly done, would total more minutes than there are in his work day. Such a situation, if left undetected and uncorrected, can easily lead to resentments and lowered morale, plus a tendency on the part of the heavily loaded worker to rush through his tasks sloppily in order to get through his assigned list each day.

Equipment important

Although, as has been pointed out, labor costs are by far the dominant factor in over-all maintenance charges, the question of proper equipment should by no means be overlooked. A maintenance man can function more efficiently and accomplish more and better work per dollar of salary with the right

STANDARD JOB TIME LIST

This standard time list approximates average working times of skilled workers operating under average conditions. Refer to it as a guide, but not as a definite example of what you should be accomplishing.

FLOOR RATES	Time In Minutes Per 1,000 Sq. Ft.	Calculators
Sweeping		Small 7 Large 9
Unobstructed	9	Chairs
Slightly Obst.	10	Large 63 Medium 35 Steno 22
Obstructed	12	Cigarette Stand 25
Heavily Obst.	16	Clock, Desk 8
Dust Mopping		Clock, Wall 20
Unobstructed	7	Desks
Slightly Obst.	9	Large 48 Medium 43 Small 38
Obstructed	12	Desk Items, Misc. 3
Heavily Obst.	16	Doors
Damp Mopping		Without glass 25 With glass 40
Unobstructed	16	Elevator Cabs (Inside) 196
Slightly Obst.	23	Files
Obstructed	27	4 drawer 22 5 drawer 27
Heavily Obst.	32	Fire Extinguishers 16
Wet Mop and Rinse		In and Out Trays 8
Unobstructive	35	Lamps and Lights
Slightly Obst.	45	Wall Fluorescent 8 Desk Lamp Fluorescent 18 Table Lamp with Shade 35 Floor Lamp with Shade 35
Obstructed	50	Partitions, Glass 50 Sq. Ft. Per Min.
Heavily Obst.	55	Pencil Sharpener 15
Hand Scrub		Pictures and Photos
Unobstructed	240	3' x 5' 45 Medium 15 Small 15
Slightly Obst.	300	Rack, Coat and Hat (6') 90
Obstructed	330	Radiators and Window Ledge
Heavily Obst.	360	(124" x 15") 45
Hand Scrub—Lang Handle Brush		Radiator (Flush With Wall)
Unobstructed	75	40" x 30" x 6" 21
Slightly Obst.	105	Sand Urns 60
Obstructed	120	Spittoons 180
Heavily Obst.	135	Tables
Machine Scrub—19" Machine		Large 60 Medium 35 Small 22
Unobstructed	25	Telephone 9
Slightly Obst.	35	Typewriter (Covered) 7
Obstructed	40	Vending Machine 60
Heavily Obst.	45	Venetian Blinds (Standard Size) 210
Machine Polish—19" Machine		Waste Baskets 15
Unobstructed	15	
Slightly Obst.	25	LAVATORY ITEMS
Obstructed	30	Cleaning Commode (With Partition) 180
Heavily Obst.	35	Door (Spot Wash) 50
Vacuum—Wet Pick-up		Door Latch 10
Unobstructed	20	Mirrors
Slightly Obst.	27	25" x 49" 20 60" x 21" 20 88" x 31" 40
Obstructed	31	Napkin Dispenser 13
Heavily Obst.	35	Napkin Disposal 10
Vacuum—Dry Pick-up		Paper Towel Dispenser 7
Unobstructed	14	Paper Towel Disposal 10
Slightly Obst.	17	Shelving
Obstructed	19	20" Long 8 126" x 6" 60
Heavily Obst.	23	Urinals—Complete 120
Strip and Rewax		Wainscotting, 75-100 Ft. Long 25
Unobstructed	100	Wash Basin and Soap Dispenser (Complete) 120
Slightly Obst.	120	
Obstructed	140	
Heavily Obst.	180	
Combination Scrub and Wet Pick-up		
Automatic Machine.....	5,000 to 20,000 Sq. Ft. Per Hour	
DUSTING	Time In Seconds	
Ash Tray	15	
Book Cases		
13" x 35" x 12"	22	
36" x 30" x 8"	33	
12" x 40" x 12"	216	
42" x 24" x 11"	49	
Cabinets		
36" x 77" x 18"	106	
30" x 66" x 18"	42	



TIPS ON PROPER FLOOR CARE

While maintenance engineers warn that "similar floors require different treatment under different conditions", there are certain well-grounded operations that should always be included in any complete floor care program.

Among these are:

1. A floor must be absolutely clean before the application of any sealers, wax, etc.
2. A floor should be coated with a surface sealer to increase density, provide lustre and resist dirt penetration.
3. Whatever sealer is used, utmost care must be used to insure cleanliness both of the applicator and of the container in which the sealer is kept.
4. Carefully measure sealer for the job being done.
5. Leftover sealer from a given job should never be returned to the main supply; it should be discarded.

Boxed material was supplied by Aiden Elstrom Associates, Minneapolis.

materials and equipment than with improperly functioning machines that are not designed to do their job well.

Equipment should be purchased not only with an eye to primary cost, but with full consideration of the savings it can effect in payroll time. For instance, a \$300 floor sander may be cheaper to buy than a \$200 model, if it will save a few hours per week of labor at \$1.30 per hour. Furthermore, the quality of work accomplished by men who are put in charge of modern efficient equipment and materials will normally be much higher than that of personnel who are constantly frustrated trying to do a good job with inadequate equipment.

Location affects costs

Proper storage space for materials and equipment is also an important factor to take into consideration, once again from the standpoint of payroll time. Storage rooms for machines and supplies should be located close to those areas in which they are used, in order to eliminate wasted time (again at \$1.30 per hour) spent in running to remote parts of a school building to obtain materials and machines and, later in the day, to replace them.

Many school buildings today are

plagued by unnecessarily high servicing costs because little thought was given to this aspect of operation when the buildings were originally planned and constructed. Foresight and understanding of the problem involved can eliminate this wastefulness if maintenance questions are given proper thought during the planning stage of a new school.

Planning saves hours

Many thousands of maintenance labor hours can be saved by following these suggestions in designing a new school building:

1. Translucent, rather than transparent glass, is easier to keep clean.
2. Provide floor-drains with 4" curbs, instead of using slop-sinks.
3. Recess all trim to eliminate dust-catching edges.
4. Hang toilets to keep floor clean for mopping.
5. Install sufficient wall plugs to feed power to cleaning and maintenance equipment.
6. Insist on modern, functional design that avoids dust-catching decorative elements.

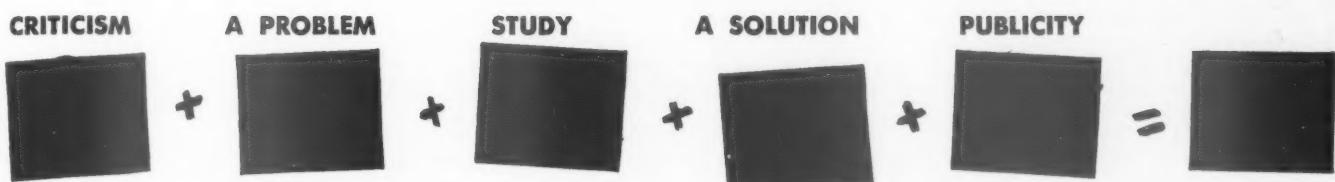
Planning cleaning and maintenance schedules and work loads during the construction phase, embodies the advantage of having personnel learn their new tasks before

entering a new building. In this way, employees can be properly trained in advance, and the usual resistance that meets attempts to change well-established work patterns is eliminated. Measured work controls can be calculated directly from floor plans, well in advance of actual hiring or training of maintenance staff personnel.

Once your cleaning program is evaluated, revised and established, it can be properly maintained only through the rigid use of written daily work schedules. Daily work sheets have space for such key items as designation of work areas, individual job assignments, names of employees to whom these tasks are assigned, additional special assignments and a checking column for completed jobs. Completely filled in and posted each morning, these daily work sheets make clear to each staff member just what jobs are assigned to him for the day. They also provide the maintenance chief with a permanent written record of who has accomplished what each day.

Many manufacturers of maintenance equipment prepare informative "how to" literature for administrators and school board members. If you would like to be supplied with such information, without obligation, circle number 799 on the Reader Service Card.

When you want to form a citizens' committee



■ ■ ■ Between 1925 and 1945, Eugene, Ore., didn't build a single school. The tax rate was very low. The town's 11 schools housed 5,500 children.

In 1945, the town began to grow. Today it has 12,000 children in 30 schools. Though this is not phenomenal growth compared to some communities around the country, it was staggering for a town that suddenly needed new buildings and at the same time found it had to replace antiquated structures that were 40 to 60 years old.

The first of a series of new bond issues was passed in 1945, immediately following consolidation with a group of surrounding suburban districts. Other bond votes followed; by 1954, a total of \$10 million had been voted in a 10-year period!

Cause for concern

None of the bond issues or serial tax levies that went with them, carried by an impressive majority. The average ran about three to two but tax resistance was mounting.

Fortunately, opposition to further building was not openly organized. There were obvious symptoms of unrest, however. For example, in 1951, at the time of the bond issue and serial tax levy for a

Harassed school boards and administrators are fast learning the value of lay citizens' committees. Here's an "operations blueprint" that tells how one was formed and how it operated.

new high school, it was reported that several young women—strangers to the community—went from door to door urging people to vote against the measures. The vote was close. Again, in 1954, a local realtor ran an advertisement urging people to vote against the bond issue. The board itself began to receive critical comments—even from local citizens friendly to the schools. Hostile "letters to the editor" in the local newspaper became commonplace.

What the critics said

In addition to believing that one-story school buildings "spread all over the lot" cost more, and that "We don't need schools with gold doorknobs," some local taxpayers objected to financing partially by means of the serial tax levy rather

than entirely by bond issues. The serial levy, described as a "pay-as-you-go" plan, resulted in a higher annual tax bill for the individual tax payer—but a great saving in interest, in the long run, over a 20-year bond issue. Some taxpayers favored doing all building by bond issues, deferring payment over 20 years, thus enjoying a lower annual tax bill, but a higher *total cost*.

After careful study of the matter in 1948, the school board felt that a ratio of about 75% from bonds and 25% on a "pay-as-you-go" basis was about right. However, with some critics saying in 1954 that all building ought to be done with bond issues, "so the kids can help pay for their own schools," the board decided that the policy ought to be reviewed.

At this time a citizens' committee

CRITICISM**THE PROBLEM THEY FACED****School Economy**

EUGENE (To the Editor) —
Just a word about our school district troubles.

We need more school buildings, yes, but we also need more economy in building them. Take for example our high school building. Our district was gyped. They say its capacity is around 1,500 students. That means that it cost over \$2,000 per pupil to construct the building for them. A building could and should be built for \$1,000 per pupil.

I was through the high school twice while it was being built. I never saw such poor plans for the construction of a school building in my life.

Also, I think there was some waste in building the Frances Willard School. These past mistakes cannot be remedied now. We will vote for the new \$3,000,000 bonds if we can have a promise that these mistakes will not be repeated. This promise must be in the paper or over the air, or a lot of us are going to vote against the bonds.

Sincerely,
W. A. PARK
851 West 19th Ave.

COMPARISON OF ENROLLMENT TO BIRTHS

Year	Births Lane County	Births at Sacred Heart	Year Enter 1st Grade	Actual 1st Grade	% Enrollment To Births	% Enrollment To Sacred Heart Births
1942	1632		1948	731	44.8	
1943	1631		1949	789	48.4	
1944	1680		1950	765	45.5	
1945	1615	1137	1951	835	51.7	73.0
1946	1957	2002	1952	928	47.4	46.0
1947	2830	2500	1953	1289	45.5	51.0
1948	3028	2511	1954	1154	38.0	45.0
45.0% Average						54.0% Average
ESTIMATED ENROLLMENT AT 45% OF COUNTY BIRTHS						ESTIMATED ENROLLMENT AT 54% OF SACRED HEART BIRTHS
1949	3022	2674	1955		1360	1445
1950	3314	2773	1956		1491	1497
1951	3499	2823	1957		1574	1524
1952	3807	3089	1958		1713	1659
1953	3944	3107	1959		1775	1677
1954	3517	2913	1960		1582	1573
1955						
1956						

1

2

was appointed by the board. The members wanted this lay committee for two reasons:

1. They wanted to know whether citizens, after studying the facts, would come to the same conclusions arrived at by the board and the superintendent and staff.

2. They also felt that a finding by a representative citizens' group would give support to school needs, whatever they were found to be.

It was also felt that laymen could more effectively carry the story to the taxpayers, once they had arrived at some conclusions.

Having decided that it wanted lay advice on building needs and financing, the Eugene board set about selecting a committee. A list

of 150 names of persons who might serve on such a committee was made. Suggestions came from school principals, parent-teacher association executive committees, civic organizations and board members. A few volunteers offered themselves when the board announced that it was appointing such a committee.

The list, when prepared for consideration by the board, gave each person's name, his place of residence, occupation, whether he had children in school and organizations in which he was active or with which he was connected. It was the board's intention to select persons who were widely and favorably known, who had community contacts with different groups, who

were representative of all geographical sections of the district and who would deal objectively with information secured by the committee.

The original list of 150 names was reduced to 100 by the board at its first meeting to consider appointments. A second session resulted in the elimination of 50 more names. Agreement was finally reached on 35 who would be invited to serve. As may be imagined, they held various points of view concerning school buildings, their financing and school needs.

Before inviting anyone to serve, the board discussed several persons who might be asked to act as chairman. Previous experience had

SEARCH FOR A SOLUTION



1

When hostile letters (far left) began to appear frequently in the local paper, the school board felt it needed to obtain up-to-date information with which to answer back.



2

A citizens' committee was formed and undertook to obtain information and make recommendations to the board. One major project carried out by the committee concerned estimates of future enrollment. Based on their survey the committee was able to make specific recommendations for areas in which schools were most needed and the types of schools to build.

3

Building new schools was just part of the job. Committee members visited many older schools, looked over plans for new ones. They recommended replacing the worst of the older frame schools immediately; suggested that five new schools be planned to be built in seven years.

3

shown that the achievements of a committee reflected in large measure the chairman's ability to work with people, to get committeemen to work consistently enough to produce results and to bring people of differing views to an agreement on some major issues. The chairman had to be a person known and respected in the community, one of integrity, open minded and approachable. The man who seemed to best fill this description was a dean at the local university.

The chairman, when appointed, asked the board to include three persons of his own choice in addition to the 35 selected by the board. One of these was a professor of journalism to serve as secretary of

the committee and help write the reports. The other two were the dean of the school of architecture and a prominent local realtor who was well acquainted with property values and community growth.

How the committee shaped up

In developing its final list of 35 to be invited to serve on the committee, the board sought a representation of both men and women. Some of those invited had been quite critical of the school buildings and their financing and some had been quite generous in their praise. The board made sure that both points of view were represented. *Its chief concern was that the persons selected could form a final*

opinion after study of the facts.

Of the 38 persons—35 selected by the board and three requested by the chairman—31 found it possible to accept appointment. Occupationally, the members were distributed as follows: housewife, 8; merchant, 7; college professor, 3; public employee and farmer, 2 each; engineer, mechanic, salesman, motel operator, utility manager, contractor, wholesaler, doctor and realtor, 1 each. The committee members also had good geographical distribution in that 11 members were from the suburban areas where about one-third of the district's population resided.

In the letter of invitation to serve, the board defined the areas it wished

The board had no previously developed plan . . .



the committee to study. It listed these as: (1) future enrollment, (2) appraisal of existing school buildings and recommendations for improvement or replacement, (3) the need for future buildings and sites and (4) methods of financing any future buildings deemed to be necessary by the committee. It indicated a free hand in the study of these matters, offered any material in the district files which would be helpful to the committee and agreed to make available any help required from members of the district professional staff as well as secretarial help. A time limit of one year was indicated for the committee's work, "on the basis of pressing need," and it was stated that the committee was being established for this particular study and nothing else.

Of the seven persons who declined, six did so for purely personal reasons and only one because he did not care to be associated with the study. A number accepted with the stipulation that they were not to be considered "rubber stamps" called in to approve some

plan already decided on by the board or superintendent.

They were informed by the board chairman, both by letter and orally at the first meeting of the committee, that the board had no previously developed plan for which it was seeking approval and the members of the committee were free to determine their own findings. At the same time, they were told that the board had its legal obligations to discharge, and that recommendations of the committee, while they would receive careful and serious consideration, were not guaranteed board acceptance.

How the committee got started

The general plan of organization of the committee was suggested by the four topics which the board indicated it wished to have the committee study. At its first meeting, the committee set for itself a definite schedule of meeting once a month. It divided into five sub-committees for research and study. These were (1) population growth and needs, (2) existing school plants, (3) acquisi-

tion of sites, (4) architecture and construction and (5) means of financing. The sub-committees on sites and financing later merged to form one committee. This was due partly to overlapping of membership and partly to some common problems which each encountered. All members of the main committee served on two sub-committees and some on three or four, time and interest being the chief determinants.

The committee agreed that no publicity would be given to its findings and recommendations except through reports released to the board at its regular meetings. Reports of the sub-committees were mimeographed for the whole committee in advance of being placed on the agenda for discussion and were again duplicated as revised for presentation to the board.

An interesting aspect of the first meeting, in addition to the expressed fear of some that they were not to have a free hand, was the differing points of view. The first became obvious when the chairman began to ask for volunteers

the citizens' committee was not a "rubber stamp."

to serve on the sub-committees. It was apparent that there were different and conflicting opinions represented in each of the areas the board wished to have studied. Natural divisions of the committee membership seemed to result with divergent points of view represented on each sub-committee. In view of this alignment, it is worthy of note that when the sub-committees later submitted their reports, *all but one was adopted without a dissenting vote!* It was referred back to the committee and was later adopted unanimously.

Generally, the work of the sub-committees followed a common pattern. They first secured such information as they could from the school district files and staff. They then assembled information of their own, which was discussed in their meetings. From these discussions,

agreement resulted and recommendations were made to the entire committee. There they went through another period of discussion, refinement and agreement before being transmitted to the school board.

What they recommended

Recommendations of the committee are perhaps the best indication of the kind of things with which the sub-committees concerned themselves. Typical were those concerning existing school plants. The committee recommended that a priority be established for the abandonment of frame buildings 25 or more years old. The result was that one was torn down immediately and a new building erected to replace it, the cost borne from serial levy funds. Other recommendations were to renovate four other structurally

sound older buildings and to make some less important changes for the general improvement of a number of the other older schools.

Findings of the sub-committee on future enrollment and new schools substantiated, in major part, enrollment forecasts made by the district itself. It found that 45% of the children born in the county entered the first grade in Eugene schools, and that 54% of those born at the largest local hospital entered the schools (see Table pg. 36). It found immediate need for a new junior high school in the western part of the district and recommended immediate replacement of the worst of the old frame elementary buildings. It recommended preliminary planning for five additional elementary schools to be built over a period of seven years, but indicated that planning for elementary schools

PUBLICITY FOR THE PROGRAM



There has been better public acceptance of new buildings and the need for them because of the citizens' committee.

and additions should be kept on a year-to-year basis to guard against building booms in large sub-divisions which would affect future population density patterns.

The sub-committee on design and construction found most planning good but was critical of the fact that landscaping usually followed the construction of buildings by from two to four years. It also objected to a gymnasium with a maple floor in a new elementary school and recommended, instead, physical activity rooms with concrete floors for greater utility. It believed that elementary school facilities should be standardized.

Approved serial tax

The committee on acquisition of sites and financing needs approved the continued use of the serial tax levy for 25% of the cost of new construction with bond issues to carry the remainder. It recommended that the serial levy be used for needed elementary facilities from year to year and that bond issues be submitted as additional secondary schools became necessary. Its strongest recommendation was for an immediate bond issue of \$3 million to finance a new high school, new junior high school and the acquisition of additional sites, as well as for advance planning by architects, well ahead of the time a building would actually be needed.

Spearheaded campaign

When the reports had all been approved by the committee-of-the-whole and transmitted to the school board, the lay committee volunteered its services to spearhead the bond election campaign and to serve in an advisory capacity in the planning of three new schools—high school, junior high and elementary. Members of the committee, when the board accepted the offer of help in the campaign, organized themselves for radio and television pro-

grams, newspaper publicity and talks to service clubs and to other community groups. Endorsement of the proposed bond issue was secured from the Chamber of Commerce, *the first time in the history of the community that such an endorsement had ever been given to a school financial measure.*

The committee devoted a meeting to organizing and planning for its part in the bond campaign. It divided into sub-committees for radio, television, newspaper and service clubs. Each sub-committee chairman made contacts and scheduled appearances for the members, either as a group or as individual speakers. When the schedule of appearances was completed, it was duplicated and given to each committee member. A fact sheet, stating the salient points developed by the committee in its various reports, was prepared and duplicated for the use of the members so that each would tell essentially the same story but in his own way. Its coverage was carefully planned and thoroughly carried out.

Vote is favorable

A favorable vote in an election held in October, 1955, while no landslide, opened the way for planning new buildings. The vote was 3,506 for the bond issue and 1,901 against. This was the largest vote ever recorded in an election in the Eugene school district. The "yes" vote increased by some 800 over the previous bond election and the "no" vote decreased by more than 300. The ratio of nine to five was the second-best received in recent years.

Architects were employed and preliminary plans were secured. In addition to assistance with the preparation of these, members of the lay committee also worked with the board and a committee of nine local contractors appointed by the board to effect economies in construction wherever possible. Al-

though some differences between architects and contractors were apparent, only one major issue arose. This involved the use of treated wood sash or metal sash. The matter was resolved by specifying treated wood sash and taking an alternate on aluminum. Bids revealed the metal sash to be less costly for the junior high and so "close" for the high school that the board accepted the metal sash—in spite of the fact that Oregon is a timber-producing state.

Board responsible

The board members and the members of the lay committee served essentially as a jury, listening to the arguments pro and con, and then giving their opinion concerning the proposals made. In the final decision only the board participated, since it had the legal responsibility. Members of the board and of the lay committee were in substantial agreement, however, on all decisions.

What was gained?

What value can come from the work of a "structured" committee such as this? The Eugene board believes that there are some very tangible ones. In the first place, three new schools have been built to house some 2,100 more children in the next three years, children who would otherwise have to go on double shifts. There has also been better acceptance of the new buildings, and the need for them, because a group of 31 representative citizens found them to be needed. The new buildings are undoubtedly a greater value because so many individuals scrutinized the plans so closely during the planning stage. As a matter of fact, both the high school and the junior high school were built at below the state average in per pupil cost, \$1,375 for the high school and \$827 for the junior high. These were substantially lower also than costs for other buildings built in recent years in Eugene. **End**

IF CLASSES
WERE HELD
OUTDOORS . . .

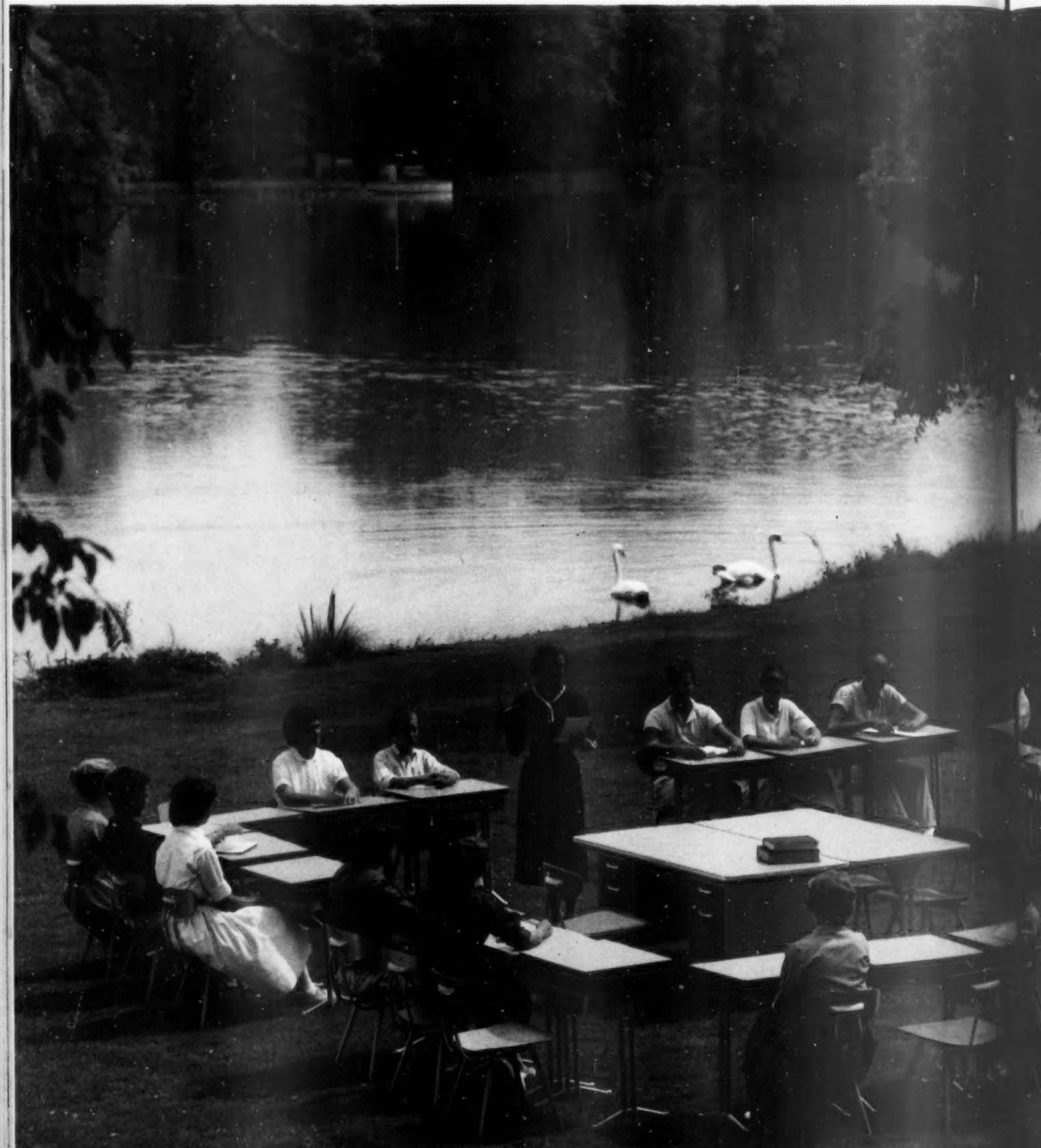


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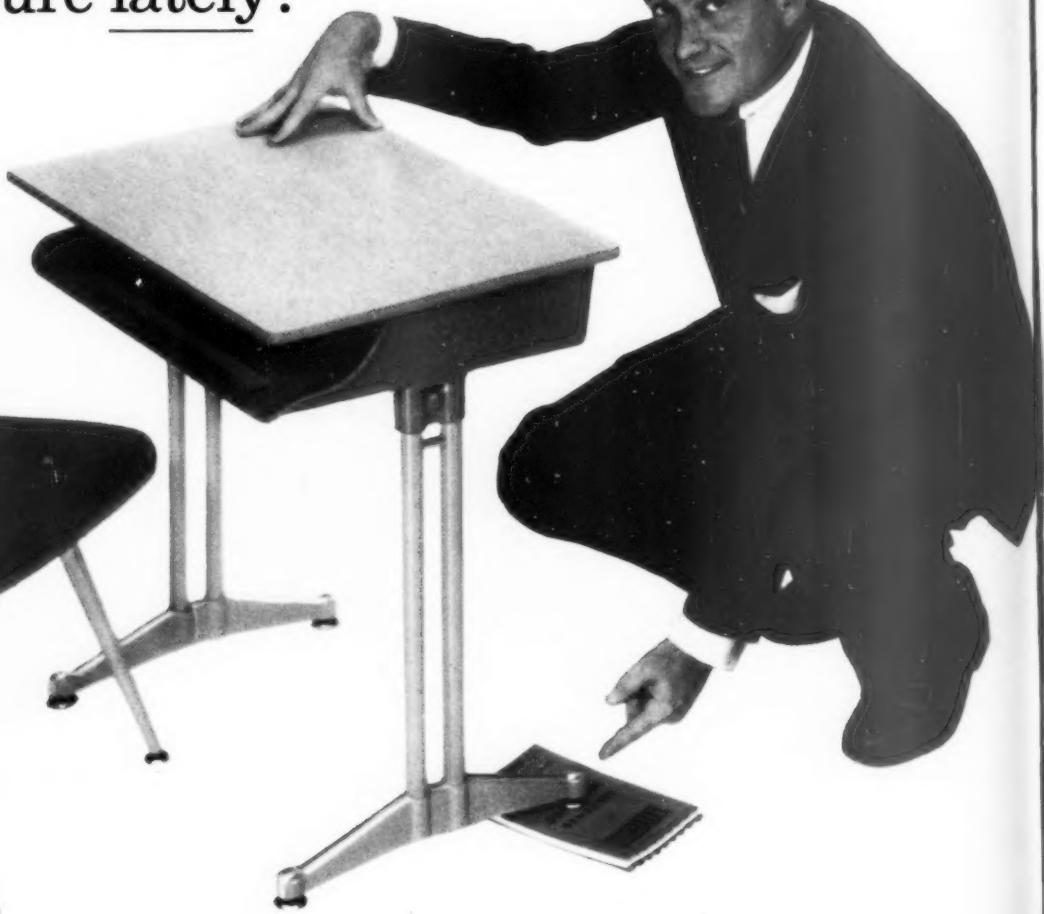
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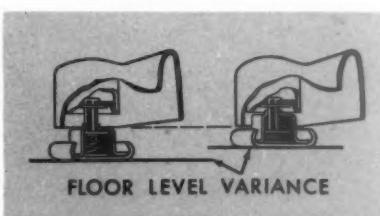
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How to reduce school insurance rates

Here are seven basic methods you can use to make significant savings on fire insurance. And you'll find the effort to save usually produces! a safer school.

By DR. PAUL SALMON

■ ■ ■ There's nothing cheap about insurance, and there's no such thing as an insurance "bargain." But it is completely feasible to look for—and find—ways in which your district can reduce insurance costs.

Unfortunately, it takes both knowledge and work to achieve this desirable end. Few schoolmen ever really take the time to explore the potential. Yet, it's a rare district that can't save real money and, at the same time actually reduce its chances of a death-dealing fire. (On this score, it is a truism in the insurance business that "*high rates are a sure sign of high fire danger.*")

Here are some guideposts you

may use in the direction of economy, along with a report on how others have reduced the rates in their districts over the past 10 years.

1. Some buildings don't need insurance. The insurance industry is set up to tailor-make every insurance program. It offers to school districts a wide variety of coverage calling for an equally wide variation in rates. You should use the advisory service of your broker (or some outside consultant) to determine what is available. You should also analyze your insurance problems so that you eliminate from consideration those buildings or facilities on which insurance *can* be excluded.

For example, your criteria for

placing insurance should *not* be based on "probability of loss." Rather, you must think in terms of whether the district could *stand* loss if it occurred.

This principle is mentioned because districts will frequently insure buildings which, because of their location or occupancy, require a high rate, but if the building were lost the district could easily absorb the loss as a regular expense of doing business. On the other hand, some buildings where the probability of loss is extremely low are *not* insured. Yet if these same buildings were lost, the district would be seriously crippled.

In many districts, recognition of this curious set of facts can mean

ABOUT THIS ARTICLE

THIS IS THE FOURTH in a series of articles on school insurance, each covering a subject of specific importance to school officials. The author is district superintendent of the Covina, Cal., schools.

The factual material was gathered in a gigantic research job done in cooperation with the National Association of School Business Officials.

The five subject areas being covered are:

- 1) How to place your fire insurance (School Management, October, 1957)
- 2) How much insurance should you carry? (School Management, Nov-Dec, 1957)
- 3) What kind of policy to buy (School Management, January, 1958)
- 4) How to reduce school insurance rates
- 5) How to set up a fire prevention program

Take advantage of help offered by the insurance industry

more real savings or better protection.

2. Take advantage of opportunities offered by the industry. The insurance industry makes available to school districts many "package deals" which insure them at a lower rate. For instance, all programs should take advantage of the 90% coinsurance clause. The rate for this will be lower than for similar coverage bought to specific value.

The industry offers the opportunity for a district to purchase insurance on a district-wide, "no location" blanket policy. If this policy is bought in conjunction with the 90% co-insurance clause, the *pro rata* distribution clause is reduced. Thus, the district assures itself full coverage even if a complete site is lost.

The extended coverage endorsement, and the vandalism and malicious mischief endorsement, both offer attractive packages for coverage which can be bought separately at a higher rate.

3. Select the most economical company. Don't forget that there are reliable companies that are *not* members of the National Board of Fire Underwriters. Some of these firms have the same strong management characteristics and financial strength as do board companies. Don't forget to consider them in the placement of your coverage for they frequently offer significant savings in rates for coverage that is exactly the same as that offered by board companies.

4. Have your rating bureau check plans. Each school district in the United States falls under the jurisdiction of some fire rating bureau. These bureaus are formed through cooperative action of the insurance industry to gather loss experience on various types of coverage so that rates can be designed to assure purchasers of a secure insurance program and to assure companies of a profitable operation.

In connection with the study upon which this article is based, 35 of these rating jurisdictions located in the United States were questioned concerning various aspects of their operation. Twenty-six of these rating jurisdictions replied and their

answers were received in time for inclusion in the report.

Each rating jurisdiction which answered the questionnaire indicated that it would be willing to review construction plans and specifications of all new buildings and advise school authorities on features that might be included or deleted to favorably affect the fire rate. This service is offered free. Take advantage of it. Many times features are built into a building which cause a penalty in fire insurance premium rates against that building for the remainder of its life. Sometimes these features are not worth their long-range cost. Other times a more acceptable substitute could be made at considerably less cost. *In planning building construction, it would be well if each district would insert in its planning and construction procedure a step diverting the working drawings of a building to the local rating jurisdiction for its advice.*

The rating jurisdiction will not only concern itself with construction features and materials, but will also be interested in the availability of fire protection equipment. It is entirely conceivable that properly installed protective equipment can more than pay for itself over the period of its lifetime in saving insurance premiums.

In addition to this positive gain, you will have the peace of mind of knowing you have done everything you could to protect the lives of students and employees housed in the building.

The agency will also advise you as to the effect of occupancy on your rate. For example, there is much more likelihood of fire in a woodworking shop than there is in a regular classroom. The rating jurisdiction will advise you how to place these facilities so that occupancy will not create an additional fire hazard to other buildings. If you place facilities which have a relatively high probability of loss away from other facilities, you will greatly reduce your rate.

5. Check your existing buildings. You may also receive good advice from the rating jurisdiction concerning buildings already in exist-

ence. They will advise you about the necessity for additional protective measures, and they may be able to save you money by suggesting modification of various facilities to reduce the exposure risk. They will be glad to review the rating schedule of your buildings so that you may identify those penalties which accrue to you because of the faults of management, untidiness or poor housekeeping. Many rates have been reduced when proper trash disposal measures have been instigated. All of these penalties are listed so that they can be readily identified and a judgment can be made concerning their eradication.

6. Use the proper term. The next major consideration in buying insurance at the lowest possible rate is finding the proper term for the coverage.

The basic term for a fire insurance policy is one year. All rates are quoted in terms of cost of premium (in cents) per \$100 of insurance protection for a period of one year. It is naturally advantageous for the insurance company to retain the account of the district for longer than one year. For this reason, companies make it a universal practice to grant rate concessions when insurance is purchased for periods of three or five years. The usual reduction for the purchase of insurance for a three-year period is to grant three years of insurance coverage for payment of two and one-half years' premium. This results in a saving to the district of one-sixth of the cost of the premium.

An even larger reduction in premium rates is offered to districts which purchase insurance for a period of five years. In this case, the district secures five years of insurance coverage for the payment of four years' premiums. This results in a 20% saving over the one-year rate. The district enjoys a further advantage in writing its insurance for a five-year period. It saves considerably on clerical time.

7. Choose an economical payment plan. There are a variety of payment plans available to a school district. Appreciable savings are possible if you choose well. Here is



From his desk, Dr. J. C. Witter, Superintendent of Schools, Caney, Kansas, is in instant two-way conversation with teachers.



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How you can REDUCE SCHOOL COSTS...

Instead of stinting on the heating and ventilating system in an effort to economize, many school boards have reduced the cost of their new school buildings by the installation of an advanced hot water system—and at the same time have increased their classroom thermal comfort.

Q. **What is this heating and ventilating system that saves up to 20% of the construction, equipment and installation costs incurred by some other systems?**

A. It is the Nesbitt Series Hot Water Wind-o-line System. Every classroom has its own Syncretizer for heating, ventilating, and natural air cooling. Wind-o-line fin-tube radiation (in wall-hung enclosures or in storage cabinets) extends along the sill to protect against cold walls and window downdraft.

Q. **How does this system save so much money?**

A. The copper tubing of the Wind-o-line radiation becomes the supply and return mains for the Syncreters in a group of classrooms or an entire wing. This saves on pipes and covering and eliminates expensive pipe trenches, mains and runouts. Circulating less hot water, smaller pipes and pumps are needed. Piping within the units is factory-assembled; labor costs are reduced. Night temperature is maintained by gravity heating, saving controls.

Q. **How does the system create a better thermal environment?**

A. By solving (in the only sure way, with Wind-o-line radiation) the cold wall and window downdraft problem, as well as providing (by means of the Syncreter) the heating, ventilating and natural cooling called for in each classroom. This double protection assures healthful comfort—without physical distraction—for every pupil in the room—even those along the windows. It is "the thermal environment most conducive to learning"—a Nesbitt distinctive.





These schools saved money

Some of the recent low costs for heating and ventilating:

In Ohio \$1.49 sq. ft.

Bath High School, Lima, Ohio
Architect: Robert A. Helser
Capacity: 550 pupils
Gross area: 37,942 sq. feet
Total contract: \$372,635
Heating and ventilating: \$56,700
Nesbitt Series Hot Water Wind-o-line System
970 feet of pipe trenches and 1,000 feet of pipe covering eliminated

In Illinois \$1.75 sq. ft.

Rural Street Elementary School
Rockford, Illinois
Architect: Hubbard and Hyland
Engineer: E. R. Gritschke and Assoc.
Capacity: 700 pupils
Gross area: 47,250 sq. feet
Total contract: \$545,713
Heating and ventilating: \$82,826
Nesbitt Series Hot Water Wind-o-line System
1,000 feet of pipe trenches eliminated

In Wisconsin \$1.62 sq. ft.

Mequock Elementary School
Town of Scott, Wisconsin
Architect: John B. Somerville
Associates, Inc.
Engineer: R. J. Cott
Capacity: 180 pupils
Gross area: 14,420 sq. feet
Total contract: \$163,409
Heating and ventilating: \$23,371
Nesbitt Series Hot Water Wind-o-line System
210 feet of pipe trenches, 120 feet of mains and piping, 60 feet of pipe covering, and night controls eliminated

The Nesbitt Series Wind-o-line System is an engineering development of John J. Nesbitt, Inc., pioneers in the field of classroom thermal comfort.

No other unit ventilator is equipped to perform as well nor so economically as the Nesbitt Syncretizer; and with Wind-o-line Radiation integrated, the Nesbitt System provides its protected learning environment on the coldest days, even in classrooms with large window walls.

The forced hot water arrangement here described makes it possible for every school to afford and enjoy the unequalled benefits of the Nesbitt System.

Schools in moderate climates where finned radiation is not essential may have the economies of the series piping arrangement through the Nesbitt Mainline System.

Send for the big book, *More learning per school dollar*.

(For more information, see last page)

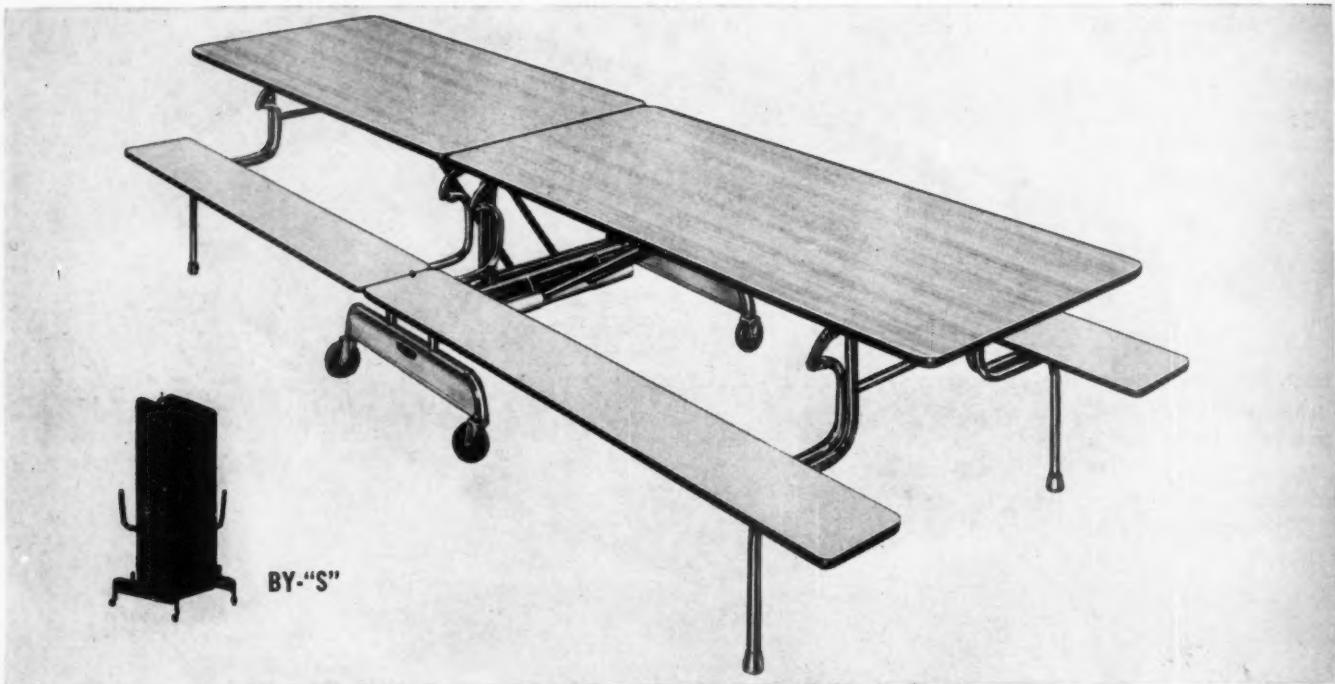
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LB-“S” Rolling, folding banquet table—Easy-to-clean "school top" of melamine plastic. Choice of lengths.

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Tip-Top-“S” Table with benches—Folds and stores flat, or nests in extremely small area. 6 or 8 ft. Seats 10 to 14.

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S I C O

a run-down of some of the alternatives:

Five-year budget plan. It has been recommended that all districts write their insurance on a five-year basis.* This can be accomplished by cancelling and rewriting all policies, and can usually be done on a *pro rata* basis if the same carriers are retained to write the new policies. Once all policies have been cancelled, it is possible to rewrite them so that one-fifth of the policies become due at the next anniversary date, one-fifth at the second anniversary date, and so forth. This makes the insurance item of the budget more manageable in terms of size, while giving the district the advantage of a five-year insurance rate. This method, the five-year budget plan, is the most popular payment plan among school districts.

Five-year policy paid in advance. There are other methods of paying for five years of insurance which should be understood by school officials. It is possible to *prepay* the full five years in advance. By so doing, the district insures itself of the same insurance rate for the next five-year period. It is a hedge against rising rates. During that time it will have no insurance premiums coming due unless new buildings are endorsed onto existing policies or new policies are purchased to cover them. However, one serious disadvantage of this method of payment is that every fifth year a staggering payment for insurance premiums must be met. Most districts find it difficult to systematically accumulate the large sums needed over the five-year period, and find it more convenient to use other payment schedules.

The five-year 78% optional renewable plan. The five-year 78% optional renewable plan can be used by districts which feel that insurance rates may go *lower* during the next five years. In effect, they are allowed to take advantage of any lowering of insurance rates

which may take place at any time during the five-year period.

This plan operates as follows: During the first year, the district pays the full annual premiums for the insurance coverage. At the end of the first year, it has the option of renewing its coverage at 78% of the annual rate in effect at the time of renewal. Should any change in rates occur during any year, the rates in effect at the next renewal date are the ones which will be applied to the policy.

The five-year annual renewal plan. A district which wishes to secure for itself the same insurance rates for the next five years as are in effect at the time the policy is written, may do so by entering into an agreement with the insurance company to buy its insurance on the five-year annual renewal plan.

This plan operates as follows: During the first year of the five-year period the district pays full annual premium. On each succeeding year the district has the option

HOW THE JURY OF EXPERTS VOTED

A jury of experts was asked to rate various school insurance buying practices on a scale of "desirable," "questionable," or "undesirable." Here's what they said. To find out which expert voted which way, here is the key to their identities:

- A. A professor of educational administration.
- B. A business official in a district of 250,000 average daily attendance.
- C. A business official in a district of 10,000 average daily attendance.
- D. A business official in a district below 10,000 average daily attendance.
- E. A representative of a stock insurance company.
- F. A representative of a mutual insurance company.
- G. A representative of a rating jurisdiction.

Practice or procedure	Status of practice or procedure as judged by each specialist		
	Desirable	Questionable	Undesirable
Recommended term for which insurance should be written:			
one year	B	ACDEF	
two years	B	ACDF	ACDF
three years	BDE	ACF	
five years	ABCDEF		
Plan used in payment of premiums:			
Lump sum	D	ABCEF	
Annual installment	ACDF	BE	
78% optional renewable	EF	ACD	B
Budget plan	ABCDEF		
Ways of reducing insurance rates			
Lessen risk	ABCDEF		
coinsurance rather than specific insurance	ABCDFG		
change building construction	BDFG	AC	
Cooperation with other districts, insurance industry, government to develop data as basis for reducing rates	ABCDFG		
Demanding "class rating" for all public schools in area	ABCDFG		

*Association of School Business Officials of the United States and Canada. Insurance Committee Report on School Fire Insurance, 1938-45 Bulletin No. 11.

of renewing the insurance carried during the first year at 78% of the first year's premium.

The advantage to the district pursuing this plan is that it is guaranteed a level premium rate throughout the life of the policy. Should the district feel that insurance rates are as low as they are likely to go for the next five years, it is enabled to stake its insurance at that rate for a five-year period without having to advance the full amount of the premium immediately.

The three-year budget plan. The three-year budget plan operates essentially the same way as the five-year budget plan, except that coverage is purchased for only a three-year period. One-third of the total insurance carried by the district is renewed each year. It should be pointed out that, should any rate change occur during the year, the new rate applies on renewal.

The three-year 78% optional renewable plan. The 78% optional renewable plan is applicable to the three-year rate as well as to the five. It works in exactly the same way as the five-year 78% plan.

Insuring new buildings

Insuring newly constructed buildings under existing payment schedules. When a district rewrites its insurance on the basis of a three-year or five-year plan, it is sometimes difficult to handle the addition of new construction, since the completion date of the new buildings may not coincide with the annual policy anniversary date. This problem can be solved by endorsing onto the existing policies, *pro rata*, the proper portion of the new values. Thus, one-fifth of any new building would be endorsed into each year of a policy which was written on a five-year budget plan. This action tends to maintain the adopted anniversary date. Another advantage which accrues to the district from having an adopted anniversary date is that there is less likelihood of a clerical oversight resulting in a policy's not being renewed when the due date arrives. When all of the district's insurance becomes due on one date, such errors are less likely to happen.

Only you can determine which

of the terms will best suit your needs. If you feel that insurance premiums in your area are destined to go down, you will undoubtedly want to purchase on the five-year budget plan. If you feel that they are destined to go up, you will probably want to purchase the five-year annual renewable plan. You should be aware, however, that each of these plans offers individual benefits and penalties. You must select the proper one to suit your needs.

How districts reduce premiums

The two-nation survey from which the statements in this article were drawn revealed that fire rates in the United States and Canada are down considerably from what they were 10 years ago. Only two states indicated any raise in rate during this period. Moreover, districts responded to the questionnaire in a way which left little doubt that the reduction in rate was brought about by action on the part of school officials.

The most frequently mentioned specific action was the removal of fire hazards, a factor in 108 of the 242 school districts responding to this question. Second in frequency of mention was "increased protection," either by school districts or by city officials. Third was a change in the type of construction being used for school buildings. Fourth was cooperative efforts with other state officials. A fifth factor, mentioned by five respondents, was increasing the amount of insurance coverage, thereby securing a lowered rate. It was assumed that the many districts which did not answer this question took no initiative in securing premium rate reductions but were content to accept such reductions when they came.

The factor of "cooperative action with other state officials" elicited one particularly interesting response. Twenty-two California districts indicated this was the prime reason for the reduction of rates in their state. These districts reported that the agency with which they cooperated was the California Association of Public School Business Officials. California's outstanding 62% rate reduction seems to

attest to the effectiveness of this cooperative effort, and would suggest that other states could do the same.

What experts recommend

The panel of experts which considered this problem made the following recommendations.

1. These men, each outstanding in his field, unanimously recommended that districts take advantage of the 90% coinsurance type policy.

2. They unanimously felt that districts should utilize the blanket no-location type district-wide policy.

3. They unanimously felt that insurance should be written for a period of five years, and in this connection they felt that the best way to accomplish this was to use the five-year budget term. Of course, they recognized that some unique problems might arise which would cause districts to take advantage of one of the other methods of writing five-year insurance.

4. They unanimously felt that companies should be selected with Best's rating of A+AAA and that the company should be selected, using as criteria the service it offers, the financial strength and management characteristics, and the past performance of the company in settlement of claims. They inferred that the fact that a company was a board, non-board, or mutual company would have little or nothing to do with its selection.

5. They unanimously felt that if school business officials would take specific action toward reviewing rate schedules and eliminating risks, they could reduce rates.

6. They felt that there should be coinsurance rather than specific insurance, and the majority of the panel, four out of six, felt that it would be profitable to consider modification of the type of building being built by the school district in order to secure the most favorable rate.

7. They unanimously urged that all school officials should band themselves together to seek lower rates for school buildings. **End**

Local business can help your school

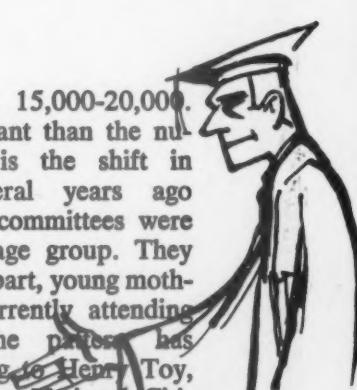
It's good public relations to enlist business cooperation. More important, local businessmen can offer concrete support if you show them how. Here's a recommended approach, a handful of case histories showing what business cooperation has produced in other districts.



■ ■ ■ School administrators have long been wary of accepting offers of help from businessmen. Today they needn't be. Too often in the past there were so many strings attached to such offers that the schools were better off going it alone.

Today the picture is different; businessmen are offering constructive, imaginative help to schools, and schools are profiting from it.

What has caused this change? During the past decade public consciousness of educators' problems has been growing. In 1947 the National Citizens Commission was able to count only seven citizens' committees for better schools throughout the country. Today there



are an estimated 15,000-20,000. Even more significant than the numerical increase is the shift in membership. Several years ago members of such committees were in the 28 to 35 age group. They were, for the most part, young mothers of children currently attending school. Today the ~~picture~~ has changed. According to ~~to~~ ^{to} Henry Toy, Jr., president of the National Citizens Council for Better Schools, council members today are a different breed. They are older men, predominantly businessmen and leaders in their communities. In many cases they have already made outstanding contributions to their local school systems. They know that schools are not run like

Presenting the

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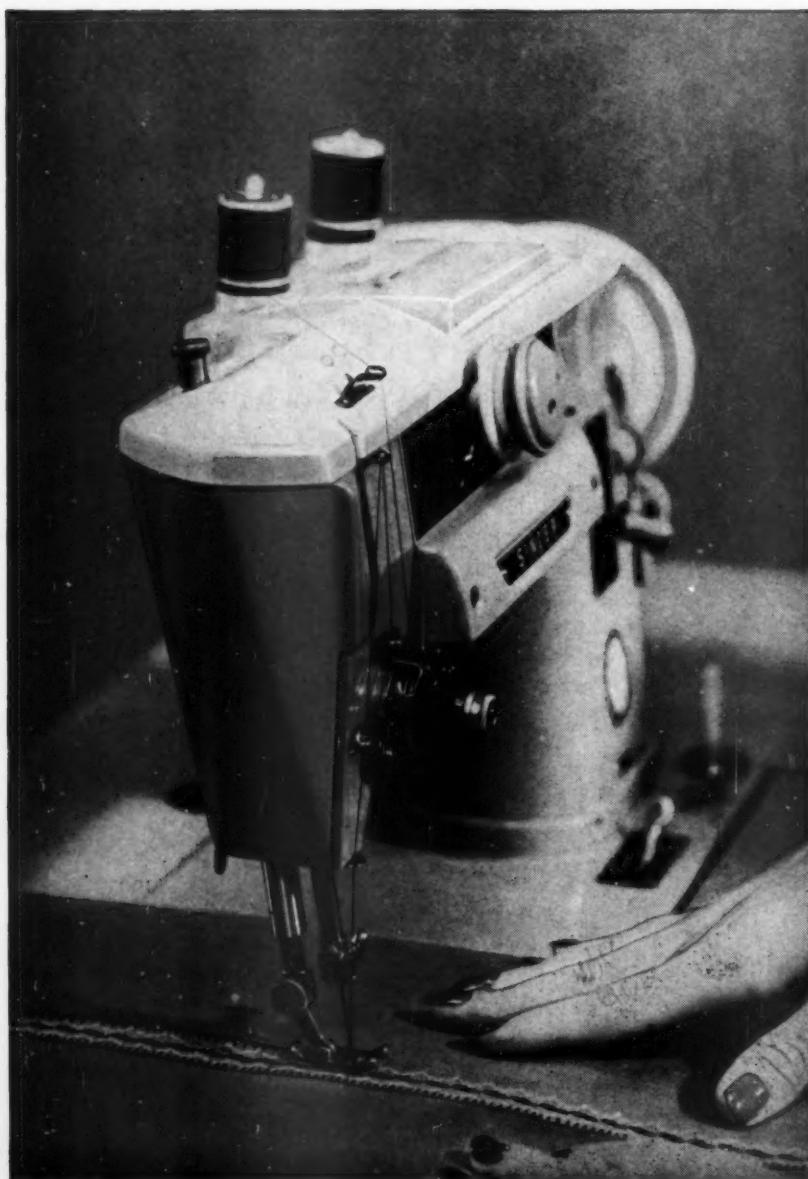
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(For more information, see last page)



Schools can get help from business today. It's up to them to make it easy for business to sponsor programs.



corporations. They know that they can't walk in and try to run things. They know too, that school administrators won't stand for any strings. They don't have to; there are enough conscientious business leaders who realize that business has a greater responsibility than simply amassing profits or declaring dividends.

Russia's launching of the earth satellites has not radically changed the picture. It did act as a sort of catalyst, however, dramatizing the need for a closer alliance between business and education.

Schools can get help today; the kind of help they want. Business wants to lend a hand, but in most cases, *they have to be told how to begin*. It's up to the schools to make it easy for business to sponsor educational programs.

What kind of help?

Last month the National Citizens Council for Better Schools published a "how-to-do-it" booklet *How Business and Schools Can Work Together*. The 38-page booklet is based on a survey of 265 companies and 305 school administrators. (*To get a free copy, circle number 792 on the Reader Service Card.*) In addition to explaining to businessmen what they need to know about schools to work effectively with them, the booklet offers scores of tested, specific programs that companies can sponsor in their local school systems. It details case histories of unusual local, regional and national school aid programs that business concerns have sponsored, either separately or as a joint effort.

On the other side of the ledger it lists ways and means that the schools can employ to capitalize on the cooperativeness of local businessmen.

Here are some of the things that business can do to help the schools. In many school systems some or all of these programs are already in effect. This may be the case in your district. If not, these are the kinds of suggestions that business

firms will welcome. They are equipped to undertake these forms of aid; they can be shown that they have been tested successfully in other areas.

1. Employ teachers during summer months. Summer jobs in major-interest fields, particularly science, can be very valuable to teachers in keeping up with current practice in the commercial world. More than one teacher has discovered after a summer's work that he has been teaching his students an outdated system or theory. New insights add to the teacher's value as an instructor. (Incidentally, this cross-fertilization often works in reverse!)

2. Hire school personnel for special research projects, particularly in the non-scientific fields. Giving teachers practical "in-plant" problems to solve can be of value both to the teacher and to the businessman. Such experiments give the teacher insight into common business problems.

3. Donate equipment for extracurricular school activities. Many companies have valuable equipment gathering dust in their store

rooms which could be used for activities not covered by the school budget. For example: a science club may not have funds for fundamental equipment; the school paper may lack typewriters or duplicating equipment.

4. Put special research services at the disposal of school personnel. A company with an extensive science reference library permits teachers in the area to use its facilities. Some companies assign staff personnel as consultants, available to answer technical queries. Some put teachers on mailing lists to receive technical bulletins or trade association newsletters. Others actually lend their specialists to the school as discussion leaders or temporary instructors.

5. Prepare special exhibits for schools. Upon request of the schools, many companies will provide equipment or displays relating to their industry. Such industry backing has been largely responsible for the increase in science fairs throughout the country.

6. Give scholarships and fellowships to outstanding students and

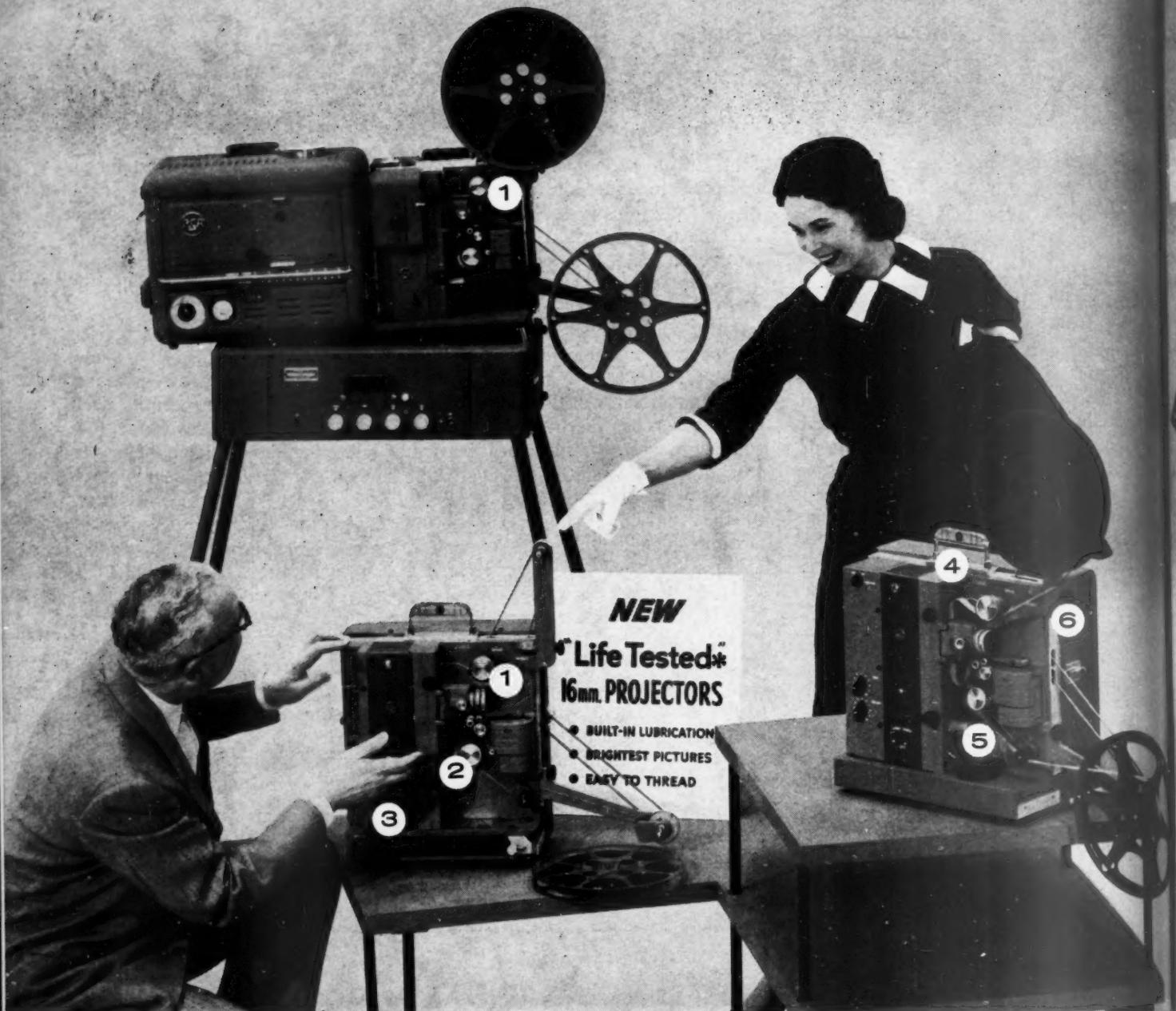
A NATIONAL PROGRAM

The BVD Co., located in New York City, has embarked on a nationwide campaign to aid schools. The company is offering annual national and regional awards to citizens' groups doing the most to aid their schools.

Building surveys, bond campaigns, teacher recognition programs, aid for gifted or retarded children or any other form of help for the schools can gain recognition under the BVD program.

In the first award period, recently concluded, Dad's clubs, PTA's, citizens' committees, Ad clubs, social clubs and many other types of organizations competed. Each competing organization submitted a 2,500 word report on its activities plus exhibits, such as newspaper accounts, of the work it did. This material was judged by a board selected by BVD. The judges chose the best program from each of five regions and also selected a national award winner.

The first national award was presented in December to a PTA-citizens' committee in Greece, N. Y., which sparked a plan that resulted in consolidation of three school districts, passage of a bond vote and construction of a new high school eliminating the necessity of transporting area students out of the district for their secondary education.



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There are almost as many ways of getting aid from business as there are types of business.

teachers. Big companies are not the only ones that have set aside sums for this purpose. Community conscious businessmen have established innumerable local financial aid programs for students and teachers.

7. Set aside special times for students and teachers to visit plants. Special visits to industrial plants and business offices are arranged to illustrate exactly how a product is made or processed. These visits show industry in action and enliven discussion of economic theory.

8. Participate in teacher recognition days. Usually annual events, activities on these days range from luncheons and dinners in honor of teachers to presentations of special plaques and awards for distinguished service. (*For a variation on this theme, see box, page 55, explaining the BVD Co.'s awards to community groups aiding their schools.*)

What schools can do

Aid—mutual aid—is not a one-way street. There are things that schools can do to further cooperation between business and education. Here are a few:

1. Set up career guidance advisory services. Help students to plan wisely for their futures by keeping them informed on a variety of careers—and the opportunities available in them, locally, regionally and nationally.

2. Invite businessmen to speak to students on their own industries. First-hand information about a specific field is important to students; a lively question and answer session can clear up career points that might take weeks of independent probing. Through this means students can find out exactly what it takes to enter and succeed in specific fields of endeavor.

3. Encourage local businessmen to hire students for summer work in their special interest fields. This gives business a short-term labor pool during their own personnel's vacation periods; it gives students insight into local industries.

4. Promote the formation of extra-curricular clubs designed to further career preparation. Anything you can do to fit a student more fully for whatever career he favors is beneficial to him and to the field he will eventually enter.

5. Give students a balanced picture of industry's role in society. Businessmen find that many students and some teachers still view modern business in terms of the sweatshop and depression days. It's part of your role as a teacher to see that they know what the true story is today.

Some actual case-histories

A variety of methods is employed in various areas of the country to aid the schools. There are almost as many ways of getting aid from business as there are types of business. But some plans have proven so effective that their patterns are spreading.

One of the outstanding examples of continuous, diversified business participation with education exists in Tulsa. Schools in this oil-rich Oklahoma city have enjoyed frequent personal exchanges with hundreds of businessmen. Not only have businessmen given generously of their time in career guidance activities, and sponsored frequent school announcements on radio and TV, but they have also given the schools concrete support in the form of two exhaustive reports on school finance needs from the businessman's viewpoint. These contributed in a large measure to the passage of favorable legislation. Through the coordination of the Chamber of Commerce, they have sponsored highly effective Business-In-Education days and are now organizing a teacher recognition program and are also actively promoting educational television in Tulsa.

In the spring of 1957, to help meet the need for more science and math training, a business program liaison sub-committee of the Tulsa Chamber of Commerce made a survey of science teachers to find

out their most pressing needs. They evolved a nine-point school aid program which was sent to 115 companies with a request for a pledge of support. Response proved excellent.

Briefed down, here is what Tulsa industry promised to do:

Provide personnel to speak to classes on standard topics, new developments and careers; conduct individual guidance conferences; demonstrate processes and scientific principles; sponsor clubs; and sponsor special group of individual projects, such as construction of a telescope.

Invite teachers and selected students to professional meetings that will be of special interest to them.

Make films, film-strips, displays and exhibits, relatively free of advertising, available to the schools.

Conduct well-organized plant and business office tours for entire classes and representative groups.

Donate obsolete and surplus equipment to schools, or lend special equipment when there is a particular and vital need.

Offer financial help to individuals or groups working on special projects (sometimes the lack of \$10 can prevent a student from completing a project).

Increase efforts to provide summer employment for teachers in fields related to their teaching.

Provide additional scholarships for both teachers and students.

If a particular company does not wish to participate in any of these ways, it is asked instead to contribute cash to be held by the coordinator for use on worthwhile projects. Administration of this program is simplified by having all requests, both ways, channeled through a single coordinator, the supervisor of science for Tulsa's schools.*

We've noted previously that educators have had reasons, in the

* Note: a detailed examination of the Tulsa program will appear in the March issue of SCHOOL MANAGEMENT.

past, to look the business gift-horse in the mouth. Nowhere was this more true than in the case of company towns. In a community where one plant dominates the labor market the tendency has been for the company men to dominate the school curriculum as well. In some cases the school program was little more than a training program for workers in the town's industry. As evidence of how drastically things have changed, let's examine the approach used by International Paper in 20 of its mill communities.

International Paper steps in

A few years ago International Paper began planning a school aid program for the communities in which its plants were located. At first the company considered scholarships, but then lighted on the idea of aid to secondary schools. Uncertain of how to implement such a program, the company consulted professional authorities in secondary education, who agreed to act as liaison between the company and the school administrators. Before contact was made with the schools, the company established certain policies it wanted to maintain. Among the main points were these:

The company would put up money for worthwhile educational projects that the schools themselves felt were needed. Thus the program could be flexible from community to community and from year to year.

The company did not want to assume financial obligations normally incumbent upon the school system itself, nor did it want to underwrite the special new projects indefinitely. Within a reasonable time, the program would have to prove itself worthy of adoption as part of the tax-supported school budget, or be dropped.

Finally, the company made it clear that it did not want to dictate to or influence the schools in any way. The financial aid would be given for worthy undertakings with no strings attached, simply as a means of improving local education for the benefit of all members of the community.

Once these ground rules were established, International Paper went ahead with its program. Its educational consultants contacted

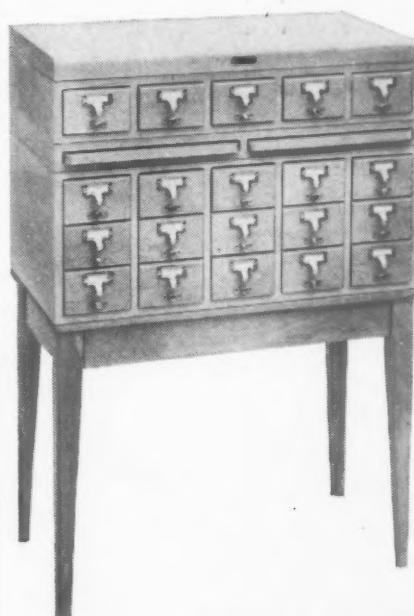
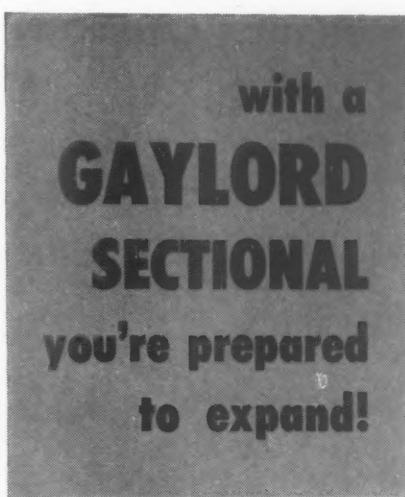
school officials, helped them survey their special needs and set up programs for the company to sponsor.

To date this program has been responsible for new educational programs in 20 of the communities where IP has mills. The projects range from development of a program designed to improve techniques in reading instruction to preparation of a comprehensive five-year guidance program designed to include every student and parent in a school system of 20,000.

These are just samples of the

type of aid and assistance that are now available to schools through the medium of business. The programs that are already in existence today, whether under the aegis of large corporations or small businesses, provide positive proof that business can offer concrete, substantial, worthwhile help to the schools. Assistance of this caliber must be welcomed by educators; its importance to students and teachers alike cannot be overestimated. Its importance to the country's future is incalculable.

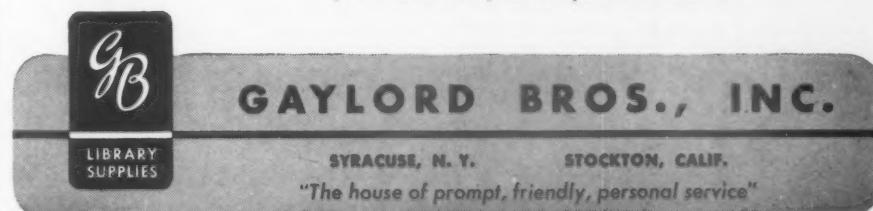
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Centralized Feeding can save school district money

Thirteen elementary schools in a Washington district saved \$100,000 in capital outlay and additional thousands in operating costs through the use of a centralized kitchen. The key: service in aluminum foil containers.

■ ■ ■ A centralized school lunch system that saved a district a capital outlay of \$100,000 has completed its first year of operation with economies of additional thousands of dollars.

The new system provides hot lunches for 13 elementary schools each day in the Bremerton, Wash., school district. It is currently being adopted by four other communities in the state.

The system saves both money and space which can be used for construction of additional classrooms in individual schools. Key to the operation is disposable aluminum foil containers in which hot lunches can be prepared and distributed from a central point.

The aluminum containers are supplied by Reynolds Metals Co., which pioneered development of similar containers for the US Air Force in-flight feeding program. All food is prepared and packaged in a central kitchen and delivered by trucks to outlying schools.

Portion size of the lunch depends on age level and is indicated by different colored aluminum foil covers which protect the food from the moment it is packaged.

The hot main portions are supplemented by cold items packaged in transparent film and by a carton of milk, fulfilling requirements for a Type A lunch.

Lunches can be served in classrooms, a cafeteria or

lunchroom. The expense of building, equipping and operating a kitchen at each individual school is eliminated.

School principals and teachers at Bremerton claim the system speeds service, enables children to eat in a more relaxed atmosphere and helps cultivate good table manners. Both teacher and student have more time for recreation during the lunch period. A high degree of sanitation is made possible by the system. The containers and all other packaging materials and utensils (including plastic forks, knives and spoons) are completely disposable, eliminating the need for collecting, scraping, sterilizing and storing dishes.

The central kitchen, built at a cost of approximately \$73,000, has a work area of about 1,700 sq. ft., and is equipped with the latest type of appliances, including large ovens, steam cookers, a steam chef and a mechanized belt assembly line. The kitchen crew consists of a manager, a cook, a baker and 10 part-time helpers, and a pantry woman. Work begins at 6 in the morning, and by 10 a.m. the last of the day's lunches are out.

Food is prepared in the normal manner, except that the items to be cooked are not completely finished but are placed in Reynolds Aluminum Cass-Rol Paks #508-C. Canned or frozen items are added without preliminary preparation whenever possible. Exact por-



Loading up. The Bremerton district uses two three-quarter ton trucks to bring food to its schools. Here a driver loads wire baskets, containing hot food, into specially prepared partitioned sections. All cold packages are loaded into the rear section of the truck which can be refrigerated with dry ice.

tions are placed in these containers as they travel along the conveyor belt. When they reach the end they are covered with aluminum foil, cut to size and placed in wire racks in groups of eight. The racks are stacked on dollies and wheeled into a walk-in refrigerator.

As soon as each school in the system determines how many lunches will be required for that day, the figures are phoned into the kitchen, so that by 9:30 a.m. a complete tally is obtained and exactly the number of portions needed in each of three sizes for different grade levels can be prepared. Each size has the same food, but quantities are increased for the upper grades. The completed units are wheeled from the refrigerator to an assembly area where the truck drivers, working from tally sheets, assemble the correct number for each grade level of their particular schools and load their trucks, which can be refrigerated with dry ice.

Delivery at each school is easy because the meals can be carried in the wire racks in any multiple of eight and thus handled without undue exertion. The small ovens at the schools have thermostats and timers and are preheated to 350 degrees F. The meals are placed in them one-half hour before serving time. With a staggered lunch period, one oven can be used to cook 208 lunches.

The food is removed from the oven after the correct cooking time. It is placed on the service line along with the cold components and milk, or placed on a cart to be wheeled to classrooms. **End**

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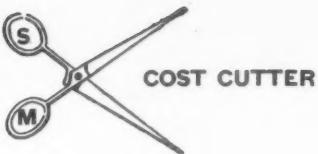


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Palo Alto finds it can save money on schools by building new ones

■ ■ ■ Elimination of old schools and the building of a new one might seem, at first glance, to be a proposal embodying considerable expense for any school district. But in Palo Alto, Calif., this has been suggested as a method of saving money for the taxpayers.

The Palo Alto business office undertook a study of the cost of operating the district's 21 elementary, two junior high and three senior high schools.

Practically all of the district's recently built elementary schools have 14 classrooms each. With an average classroom load of 30 pupils in grades one through six, plus 25 in kindergarten for each morning and afternoon session, there is an enrollment of from 440 to 460 per school. Average daily attendance is between 430 and 450.

Checking five of the schools where capacity operation was anticipated, the district found its costs budgeted at \$342.24 per ADA. For the purpose of its analysis, it thus set a figure of \$350 per pupil as the economic norm for the district. The first result of this calculation was a revelation that several schools required budgets substantially higher than that figure.

In three of the older schools, about \$122 per child will have to be spent this year above the economic norm of \$350. This totals some \$82,000 more than the district would spend if all the children were in new, efficient structures.

It is clear, then, that if Palo Alto were to eliminate these older schools and replace them with new ones, great economies of operation would follow. The business office of the district has therefore recommended to the board of education that two

of these old schools be closed, and that their students be transferred to newer buildings.

By selling the property on which the two closed schools are located, it is estimated that more than \$200,000 could be realized, to be applied against a reconstruction cost of \$300,000 for a third old school that the business office feels can be renovated.

A net capital outlay of something under \$100,000 would thus be necessary; when figured against the \$82,000 operational cost saving

which would be effected in the very first year of operation, the proposal can be said to be virtually self-liquidating.

Furthermore, new taxes on the land formerly occupied by the two old schools would help offset the \$100,000 capital outlay required.

Should this proposal be ultimately adopted by the board, it is believed that the net result would be to get students into first class buildings, where they could get better educational facilities at lower cost per pupil to the taxpayers. End

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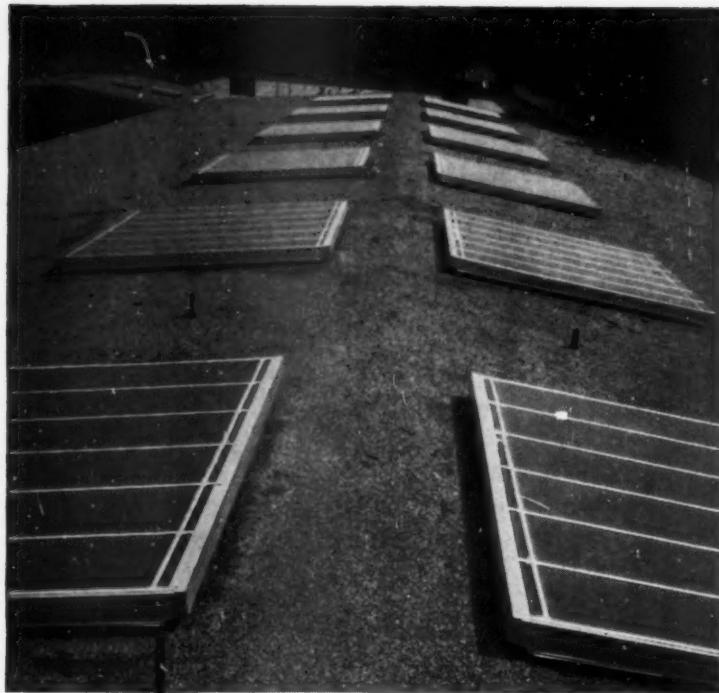


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Answering the Reader's Digest attack

continued from page 25

site preparation and improvements, including playground fields and blacktopping. Portland includes all this in figuring square foot costs. Or the figure may be computed on the construction price of the building alone. Even that estimate can vary, sometimes including porches and unfinished sections in the square foot area.

Site development is often a major part of the construction cost. It accounts for a big chunk of the \$40,381 per classroom cost of the school now started on the Bridlemile site. There, water and sewage disposal facilities and a road had to be provided. The high per-classroom cost of Wilson high school in the west hills includes about \$500,000 worth

of dirt moving and unexpected site costs involving underground springs.

Boards balance costs

Since schools have to be built where the children are, school boards are constantly balancing such things as site development costs against the price of property and its desirability of location. Against the high site development costs of Wilson's beautiful grounds should be balanced the relatively low property cost, about \$65,000 for 26 acres which will later include an elementary building. The 10 acres in downtown Portland on which the new Lincoln high school was built cost \$250,000 in the early '40s.

Buying property while it is still

undeveloped to avoid the towering costs of removing homes and businesses is a first purpose of every school board. The site of the new Madison is 20 acres and cost \$65,000.

Few if any of the square foot estimates of school building costs seen in magazine articles or in the many advertisements for all-steel and pre-fabricated buildings include the cost of the site developments, and none, not even Portland's figures, include the cost of the property. They should both be included in any answer to a taxpayer wanting to know what kind of school plant he is getting for his money, Superintendent J. W. Edwards believes.

2

Varied factors color picture on school's cost

In addition to the variations in methods of figuring, the variations in climate between localities, the variations in site costs that affect the picture of school building costs, the taxpayer who seeks a realistic appraisal of what his system is doing must include two other important considerations.

One of these—the rising cost of construction in general—everyone who tries to build so much as a garage knows and no one can do much about.

The other—the functions for which his schools are being designed—is the product of the community. What is the pattern of a public education system which the community accepts?

Is it satisfied with school buildings in which the classroom subjects of reading, arithmetic, science, history, languages, etc. can be adequately done in the five- or six-hour

school day? Does it want industrial arts, band, orchestra, chorus, home economics, journalism, physical education and competitive athletics, arts and crafts? Does it believe there should be personal counseling available to all students in a high school? A record system on each student, with counselors, office staff, and space in accordance? Are kindergartens and cafeterias among accepted school standards?

Many meetings held

Does it regard school buildings as public meetings centers for adults as well as children, at night as well as during school hours? (There were 32,000 meetings of out-of-school groups in Portland buildings last year.)

Nationwide there was a 49% increase in school building construction costs between 1946 and 1956. The index went up another 4.2%

between Jan. 1956, and Jan. 1957.

Architects and engineers, in recent reports to the school board, say the soaring building costs have hit the Portland area harder the past year because, for some reason, construction prices stayed down longer here than elsewhere on the coast. Between 1948 and 1955 school construction here didn't rise as high as elsewhere, then it shot up.

Contracts on two units of the Portland State college classroom building illustrate the sudden increase. The contract awarded in 1957 was 20% higher than the one in 1955 for a similar structure.

The visitor to the huge new Madison high school is likely to find himself bowled over—by its sheer size if nothing else. He will probably find himself torn between an immediate feeling that this can't all be necessary, and a follow-up wonder of how else it could have been

School operations have changed from 20 years ago—that must be considered in planning a building

done IF all the activities that now make up a high school as a community center are to be incorporated into the building.

These are a few of the differences in the high school—and grade school—operations of 20 or 30 years ago that show up in the buildings of today as compared with those built yesterday.

There used to be four science rooms in the high schools. Now there are nine with more cabinets for storage, more sinks, a plant alcove for biology.

The old buildings either had no shops or had small mechanical drawing rooms and a small wood shop. Now there are four fully-equipped wood, metal and general shops, the latter with emphasis on electronics.

Home economics was cooking and sewing, now it includes washers, ironers, electric sewing machines, consumer and family life study.

Cafeterias come gradually

None of the early schools were built with cafeterias though they gradually acquired converted ones, each operated by the individual school. Many of them were condemned by the city sanitary division in the late '40s. Now all but the primary schools have planned cafeterias, meeting the city's restaurant code.

Kindergartens, too, are now a part of the system.

Business education was, until 12 years ago, confined largely to what was then the Commerce high school, now Cleveland. The comprehensive high schools had only one typing room (and that was for secretarial students), and a bookkeeping room. The business education wing in new high schools includes four typing rooms, two general classrooms for shorthand and bookkeeping, a practice room for business machines.

The administration unit was once just the office, designed to house the principal and a small clerical staff. Now there is a principal's office big

enough to accommodate 20 to 30 visiting parents; a sizeable secretarial area where records of some 2,400 students and their hourly schedules are accessible; offices of three vice principals; four to seven guidance and counseling rooms where programs, discipline and other individual student problems are worked out.

There weren't any teacher lunch rooms or teacher lounges except as converted from other space.

Art equipment provided

Art was taught in one classroom. Now there are four with equipment and storage to handle the various materials used.

The old buildings were not designed with orchestra and band rooms, nor with any practice rooms. The district did not provide instruments until about seven years ago.

Gymnasiums were small with little if any allowance for seating. There was a small shower room and a basket room. The new gymnasiums are designed for double use by boys' and girls' classes in physical education which is compulsory under state law. There are shower rooms, basket rooms, offices for physical education teachers, team rooms.

These are just a few of the sometimes overlooked differences in functions for which high schools are built today in Portland. Differences in the presently accepted standard of elementary school function do not show so spectacularly in the buildings. The cafeterias are there, the gymnasiums instead of basement play rooms, the auditoriums—but these have been combined in all but the first schools built back in 1947-48. The "cafetorium" is the combination which Portland school heads have found most workable, they say.

All buildings, including the simple primary units, have storage space and other facilities to ease the teacher's job that were not allowed for in the older schools.

Whatever the mistakes made in Portland's new schools the buildings aren't just "dreamed up" by architects and administrators. They are planned in great detail and with advice of the principals, department heads and teachers who work in them. The book from which the architect is working on the proposed southeast high school runs to 250 pages of specifications from the schools.

There have been some outstanding mistakes as Superintendent J. W. Edwards and his staff admit. But there is a continual evaluation which, they believe, eliminates errors as later buildings go up.

Criticism brings cut

Creston was the first school Portland built after the war, actually the first one in nearly 20 years. It cost too much, with its separate auditorium, gymnasium and cafeteria and its vast amount of ceramic tile. Criticism of the ceiling-high tile in Creston halls caused them to cut most of it out in subsequent schools, and substitute cheaper materials, Edwards said, but he is not sure that there will be a saving in the long run. Creston's halls have never had to be repaired or painted.

By 1951 or so, the separate cafeteria, auditorium and gymnasium had been abandoned in elementary schools. For a while a combination of cafeteria-gymnasium was tried but that interfered with class work, and the cafeteria-auditorium combination has been the pattern in later years.

Lobby space reduced

Some schools were found to have too much lobby space and too much office space. That has been cut down, so has the width of halls. From 62,000 square feet in Binnsmead, there was a cut to 49,000 at Lent and with more classrooms in the latter school.

On the other hand classroom size has been increased by two feet to meet state standards.

City building code factor in higher building costs in Portland as compared with outlying districts

Many smaller outlying districts are building schools cheaper than Portland is.

They are not putting up the same kind of buildings for less, but they are building attractive, serviceable schools at lower costs than Portland's. Even when you allow for the differences that make square foot comparisons unreliable, Portland has been putting up more solid, more lasting—unquestionably more expensive—buildings than most of the smaller districts in the area.

Part of the reason is something over which school heads have no control—the city building code that sets standards on virtually every part of the structure that suburban school buildings do not have to meet. But a part of it is the policy of the board and administration—that within limits of the funds voted by taxpayers, it is economy to build grade schools for minimum of 25 years' use and high schools for a minimum of 50 years, with as little maintenance as possible.

Time factor considered

Which brings the citizen, who really sets out to find out whether he is getting his money's worth in school buildings, to the question—how long should his district build for? Is there an argument that schools should not be too permanent? And what does the past show—have school buildings been abandoned before their time, with loss to the district? Is there reason to accept higher maintenance costs and earlier replacement of buildings as part of passing the load to future generations?

Here all school heads, whether their districts are building for im-

mediate economy or forever, would like to see another cost measure injected. They would like to see the long-time, per-pupil outlay for school housing added to the square-foot, and per-pupil, per-classroom cost measurements that magazine stories toss around so freely.

To speak of per-pupil cost of a building as though only one group of children were going to occupy it, they say, is not realistic. On this basis, Madison high school, which opened this month, cost \$1,778 per student. Prorated over 50 years of usage by 2,400 children, it cost \$40 per student year, they say.

This kind of reasoning won't stretch the bonding capacity of a hard-pressed district nor ease the community tax load that in the majority of districts is chief determinant of the kind and cost of school buildings. However the cost of school buildings is only a fraction of the public's education bill, they point out. The generalized national publicity about the school building crisis in the face of rising enrollment has given the impression that buildings are the major school cost. In fact, the best estimates of the National School Boards' Association are that construction accounts for from 7% to 15% of school costs. The rest goes for teachers' salaries and other operational expenses.

Saving becomes expense

School boards, like the citizen who builds a home, have to consider, first, how long the structure is likely to be used. Then—and this is the moot and maddening question for every builder—where does a saving in cost of materials become an unwarranted expense in maintenance? Where is it safe and

economical to hold to minimum rooms and room size, and where is it odds-on that later demands on the building will make expansion and remodeling costs exorbitant?

As noted, Portland's building costs are within the moderate range shown in recent magazine studies of the national school scene. And the average for the state puts Oregon among the states building for lowest cost.

Even when you allow for discrepancies in the square-foot measuring stick used, there is an appreciable gap between the \$6.20 to \$11.71 per foot paid by Parkrose for its elementary buildings over the period from 1946 to 1956, and the \$9.40 to \$13 Portland has paid over the same period.

The discrepancies between Portland and Parkrose square foot figures are discrepancies the layman studying school costs should take into account in comparisons of the costs of any two buildings. Parkrose does not figure its site development costs into its total building costs for purposes of arriving at a square foot breakdown. Portland does.

Schools' needs differ

Parkrose, which operates junior high schools where Portland does not, builds its elementary schools for six grades. It does not have the need—and the public demand—for as extensive gymnasiums, auditoriums, shops and home economics facilities as Portland has with its eight-grade elementary buildings. Again, Portland is committed to kindergartens in all grade schools. Few smaller districts in Oregon are.

With all this allowed for, Parkrose's new grade schools have cost taxpayers less than Portland's.

Portland's high schools also have

cost more than those in the smaller districts though, here again, comparisons are difficult. The recently organized union high school districts in the Portland area and many elsewhere have, for the most part, built their schools a piece at a time, housing their freshmen or freshmen and sophomores the first year while leaving their upper class students to finish on tuition in neighboring high schools.

Student bodies large

Portland is building for bigger student bodies than any except the largest first-class districts of the state, and building all at once. Wilson, the exception, had six unfinished rooms when it opened in 1956 and already has an enrollment that makes finishing these rooms a necessity this year.

David Douglas union high school on the eastern edge of Portland, figures to about \$8 a square foot—an extremely low figure by any national round-up of high school costs or compared to \$15 and \$16 for Lincoln, Wilson and Madison. Its superintendent, Floyd Light, says the \$8 is a poor estimating figure, that a better one is the \$1.5 million now in the building, including \$100,000 for an athletic field. The building, put up a class at a time, now is crammed according to Light, with the current enrollment 1,500. A bond election was necessary to add another classroom unit that may later become a junior high school.

City code factor

Light pointed out that while cheaper materials and shortcuts had to be used at Douglas, there is a big difference in the building situation his district faced and that of Portland, just in the matter of the city code. Douglas did not have to meet city building and fire standards, could build on one level, which is estimated to be 25% cheaper than two-story structures under the code. There is a limit to the spreading of a workable high school building and he believes that, beyond a student body of 1,500, you can't keep it all on the ground and within the management of the administration.

Whether Portland should have high schools with 2,000 to 3,000 students or not, is a good question.

But don't think it can be debated on its educational merits alone. The heating plant, auditorium, gymnasium, shops, cafeteria, athletic field, represent a big part of the cost of the modern high school plant, and these have to be built the same way for a student body of 1,000 as for one of 2,400. It would cost a minimum of half again as much to put up two high schools of 1,200 students each as it did to build one Madison for 2,400, school heads say.

Site cost gives pause

A current staff study paving the way to staggered class hours at Grant and Jefferson is a reflection of this building and site cost dilemma. A few months ago when the administration showed the school board a forecast of continued rising enrollments at these two already large schools, directors looked into the matter of a new high school somewhere between Jefferson and Grant. To buy the site alone, it was estimated would run to \$500,000. The plan of ex-

tending the class day, with some students starting early and others finishing late, has been submitted as a solution to be tried when enrollments make it necessary.

Viewing school building costs with alarm has become a popular subject. Magazine writers and national columnists can afford to take a national view that copes with no local school or finance conditions. They can even take an entertaining global view and not have to come to grips with reality as seen in a *Ladies' Home Journal* article based entirely on a comparison of an expensive New England high school with a privately operated school in Tangiers.

Since nothing is likely to work a miracle—either of lower construction costs or lower enrollments—there is every reason for the taxpayer to look to his school building costs. But the place to start looking is in the buildings themselves and at the meetings of his local school board and administration where those buildings are planned and his tax money spent.

End

PORLAND SCHOOL COSTS

ELEMENTARY SCHOOL COSTS

School—	Date	No. Classrms.	Student Cap.	Cost Per Student	Square Foot	Cost Per Classrm.
Creston	1947	17	510	\$1657	\$11.60	\$49,733
Binnsmead	1949	19	570	1180	10.69	35,422
Scott	1949	18	540	1045	9.40	31,358
George	1950	17	510	1350	12.29	40,498
Gray	1951	25	750	1138	12.37	34,135
Mt. Tabor	1952	16	480	1329	12.59	39,883
Eliot	1953	17	510	1278	13.18	38,364
Whitman	1954	21	630	1055	11.09	31,653
Hayhurst	1954	22	660	808	10.80	24,224
Clark	1954	25	750	800	11.45	23,974
Bridlemile	1957	20	600	1346	12.80	40,381

HIGH SCHOOLS

Lincoln	1950	46	1400	1836	15.44	55,903
Wilson	1954	50	1600	2330	16.00	74,595
Madison	1955	75	2400	1778	15.07	56,920

PRIMARY SCHOOLS

Ball	1948	8	240	590	9.54	17,683
Joseph	1949	8	240	557	8.85	16,697
Bridger	1951	8	240	635	9.74	19,079
Creston	1953	6	180	675	12.04	20,247
Applegate	1954	10	300	661	10.69	19,858
Youngson	1955	8	240	838	11.28	25,142
Lent	1956	8	240	1200	13.60	36,024

Above are costs on the three types of buildings constructed by Portland schools: the simplest, the primary units, many of which are enlarged to full size as enrollments rise; the elementary schools, and the more expensive high schools.

Cost differences reflect many things—rising prices, early inexperience as seen in Creston, still the highest priced; cost of site development where sewers, roads, water facilities must be included, and in case of Eliot, a two-story building necessary on small site and involving fireproof construction.

The pro and con of portable classrooms

continued from page 30

Quonset huts which were used in the past for temporary classrooms. It stipulated that the new demountable rooms should have the appearance of permanence, must have sufficient light, air and heat for the comfort and health of teachers and pupils.

Contracts were awarded for units at McLean and Annandale high schools. The price for the two was \$213,867, excluding outside improvements, public address systems connected to the main plant, and lockers, which were installed under separate contracts. The total cost was \$229,174.

The general contract specified 150 working days, although the builder told the board he expected to put them up in less time.

An aluminum strike delayed the builder. He was beset by a host of minor problems. The addition of accessories took more time. Nearly eight months elapsed before the rooms were opened to eighth grade classes.

The buildings are not a stock product of any given manufacturer. Bailey used a combination of several standard products. The square foot price came to \$13.30 and accessories brought it up to about \$14.25. Permanent classroom construction currently costs the county between \$11 and \$12 a square foot.

McLean provides for 125 stu-



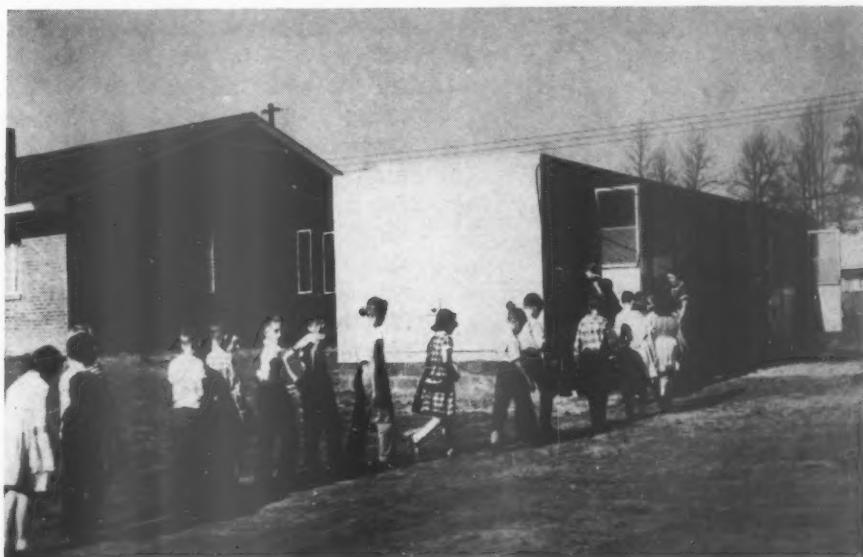
Viewed from outside, McLean's portable is not an imposing structure. Cost of \$13.30 per square foot was more than for conventional building.

dents. It has 5,350 square feet in a rectangular unit of five classrooms with a section for a heating plant, general storage, janitor's room and bathrooms. Annandale has 11 classrooms to hold 275 students, and 10,700 square feet with the same facilities.

The units are built with a concrete foundation, steel frame, exterior of corrugated aluminum in large size panels and glass window walls. Interior partitions are cement asbestos.

Bailey says that trouble was experienced in keeping the large outside panels rigid and that there was difficulty in concealing the mechanical works of piping and conduits. There were problems too in attaching chalk boards and wardrobe hooks to interior walls.

Trailer classrooms give temporary relief to Fairfax overcrowding. Built at a cost of \$7,000, each trailer holds a full class of 30 third or fourth grade students.



The architect says the only "redeeming feature of the demountable units is the removable interior partitions." The rigid steel framework and aluminum shell "could be turned into a usable field house."

Neither the architect nor the school board nor school administrators recommend a repetition of the experiment. School board member Samuel F. Solomon acknowledges it was a failure.

"I was for doing anything we could to expedite the building program," he says. "However, the construction is nowhere near as good as permanent construction, and the small saving in time has not been worth it. I certainly will not recommend them in the future."

The architect adds, "Frankly, I think they're homely!"

Mobile classrooms

In a second experiment, Fairfax County has outraced elementary school enrollment by conducting classes in three specially built trailers.

The mobile classrooms, parked at the side of Sleepy Hollow and Belvedere elementary schools, cost about \$7,000 apiece. They were ordered as temporary relief from population pressure while permanent classrooms were under construction. They were designed and built by the American Trailer Co., of Washington, with the help of Assistant Superintendent J. H. Rice of Fairfax County.

The trailers hold a full class of 30 third- or fourth-graders even though they are smaller than the average classroom. The students sit

in three long rows facing the teacher's desk.

They are made of steel and aluminum, have all the standard equipment including two end doors, built-in shelves, permanent blackboards, fluorescent lights, ceiling ventilating fans, a small oil furnace and asphalt tile floors. They are 45 ft. long and 12 ft. wide. Windows form one whole side.

Electricity is supplied by the main school plant. According to Rice, the thermostatically controlled stoves

have the approval of Underwriters Laboratory. Ventilation in the trailers exceeds state standards for conventional classrooms.

The school board saved a bit of money by buying just one set of wheels for all three trailers. Once moved, the trailers are put to rest on cinder blocks.

Rice says queries on the vehicles have come to the staff from all over the state of Virginia and from as far away as New Jersey.

The need for the first trailer was

ended at North Springfield by completion of a 22-room elementary school which opened last month. The vehicle and a twin were moved to Sleepy Hollow.

A proposed Park Lawn elementary school, on which bids have been opened, will take the pressure off Belvedere next year, which in turn will lose its trailer to another trouble spot. Sleepy Hollow, however, is expected to use its two trailers for at least a second year and perhaps a third.

Los Angeles says: *"There is nothing more permanent than a temporary building."*

There is nothing new or temporary about the use of portable classrooms in the Los Angeles area school districts. For many years, the construction policy has been to build 80% permanent structures and 20% portable bungalows.

"These are sometimes called temporary," says Virgil Volla, associate superintendent of the Los Angeles city schools. "But let's not kid ourselves—there is nothing more permanent than a temporary building."

The danger of over-building is very real in Los Angeles because of the characteristic mobility of Southern California's population. Over 100 classrooms will be moved this year to add or subtract space as population shifts necessitate. One of Mr. Volla's favorite examples is the South Park elementary school, in an industrialized district on the city's southeast side. In June, enrollment indicated that four extra classrooms would be needed in September. They were moved in during summer vacation. At the same time, a large industrial plant in the area shut down. When school opened, not only were the four portable classrooms not needed, but—in addition—two rooms in the permanent building were vacant!

In Los Angeles, it takes at least 18 months to construct permanent buildings. Portables require only four months. This is partly because

the plans are standardized and have already been pre-checked by the state division of architecture. Thus, clearance can be obtained in a day. Weeks elapse while plans for permanent structures are checked.

Cost is also held down because so many portables have been built that local contractors don't have to tool up to build them. They know the specifications, move swiftly, and virtually mass-produce them. "It costs approximately \$7,500 for a Los Angeles portable classroom," says Volla, "while the price of a similar permanent classroom is about \$15,000. To each figure must be added \$1,000 for equipment (elementary school) and a pro-rated share of sanitary facilities, site work, storage space, arcades, etc."

How they are built

The new portables have plywood interiors, stained or painted and stucco exteriors. They have the same acoustics, lighting and equipment as permanent classrooms, except for a sink or running water. The modern bungalows are mounted on mudsills and have an airspace below the floors. In the old days, the portables were moved in or built on ungraded land, and kept level by adjusting the foundation to the natural grade. Now, however, the site is rough graded and black-topped. It has been

found that construction goes faster on clean ground and that fewer time-consuming foundation accommodations need be made.

Another money-saving practice which Los Angeles school builders learned the hard way is the current policy of installing portables close to the permanent school site. They used to be placed at the far end of the site which turned out to be costly, because in nine cases out of 10 there was need for them after the permanent building was completed. Nowadays, the portables are set close to the site of permanent building and the new plant is built around them.

It costs an average of \$2,000 to move a portable, although individual costs vary greatly, depending on the sites the building is being taken from and to. The route of the transport job is faster too, with commercial house movers doing the job. In a move, the foundation—usually about 18 inches above the mudsills—is knocked out and discarded. Support beams are put in place. The bungalow is shifted onto rubber-tired dollies—and away it goes, at 30 mph, to a new location.

Maintenance costs are higher

Mr. Volla estimates that portables cost 7% more to maintain than permanent structures. They don't look as well, are more affected by external temperature

changes, and, because of their separation from a main plant, make the total school harder to administer. Consequently, he says, if you're in a stable community, there is no argument—there is nothing better than a permanent structure.

In an effort to find out how a sampling of educators in the sprawling Los Angeles area feel about the portable schools SM editors visited several locations. Here is what they found out:

Enadia Way tells of "minor irritations"

Portables of varying vintages are in use at this all-bungalow school. These were not built on the site, but were moved in from other locations as a stop-gap measure until completion of a permanent building next May or June.

The office building is a frame bungalow, at least 30 years old. The others are of modern plywood and stucco. Some of the older ones have unvented heaters, fiber board ceilings and large white frosted globes on the lights. The newer ones have vented heaters, acoustic tile ceilings and light fixtures that are hung lower and are more efficient. Some plywood walls are painted. Others are stained.

As classrooms, they are very attractive.

The principal, Max Voyce, says that teachers like the decentralization of bungalows. Not only do they have a feeling of independence, but also there is less general hurly-burly. (See principal Ben Wetzel's remarks about his school at Van Nuys.)

However, other irritations are considerable.

Teachers in lower elementary grades miss a sink, because its lack makes painting and clay work difficult. Children must go outdoors to a central lavatory building even in cold or rainy weather. (This is not much of a problem in California but would be a major one in other climates.)

Non-classroom space is virtually non-existent.

1. There is no cafeteria or other feeding area. Children must bring

sack lunches and eat on the playground. In bad weather, they must use the classrooms for eating.

2. There is no private area for teachers. The only extra room, adjacent to the principal's office in the old bungalow, houses the school nurse's desk and two cots for children who become ill—as well as work tables for teachers.

3. There are no restrooms for teachers. In addition to the children's lavatory, there is *one* toilet at the school—located right behind the principal's desk. This, says Mr. Voyce, is the one lack that the teachers mind most.

4. Books and supplies for 550 children (soon to be 1,000) must be stored in two rooms measuring 9 x 12 ft. each.

Pasadena calls them "permanent transportables"

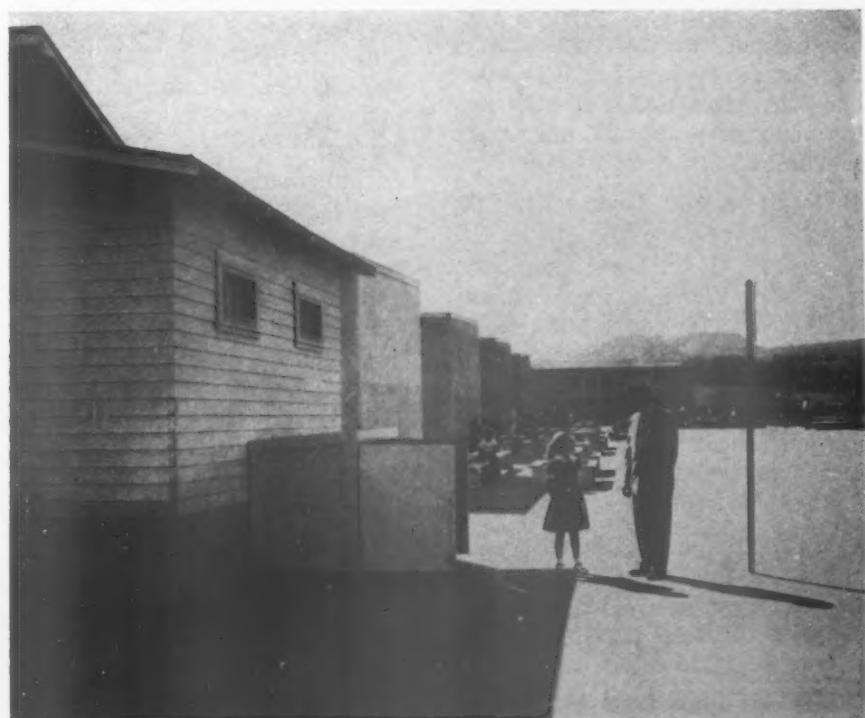
Pasadena's building department head, John Glaser, likes to call the bungalows he has designed for his district "permanent transportables." Unlike those of the Los Angeles district, the foundations are not sacrificed when they are moved. They are installed on foundation beams—or "skids"—which move

along with the building itself. All that needs to be done to the building is to sever utility lines and re-attach them wherever it is put down. All that needs to be done by way of site preparation is to sink concrete piers (of whatever height is necessary to adjust to the grade of the land) and then slide the skids across the piers.

"These transportables are in every respect comparable to classrooms in permanent schools as far as educational facilities are concerned," says Glaser. Unlike most portables, they have running water. General physical specifications include frame and stucco construction, rockwool insulation in the roof, acoustic tile ceilings, plywood interior walls, and plywood floors covered with asphalt tile. Dimensions are 18 x 27 ft., from which must be deducted six feet of the long dimension from usable classroom space. This becomes a porch, which is shielded by an archway of asbestos louvers. At the opposite end of the building there is a translucent corrugated plastic sunshade over the windows. Cost: Approximately \$13,500.

But even at this price, these classrooms are considered to be

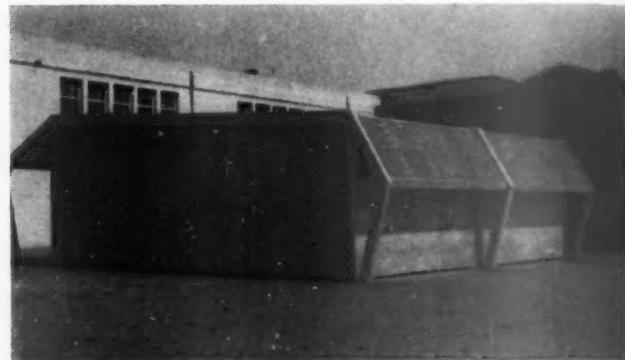
Principal Max Voyce stops to talk with a student attending class in bungalow.





Three classroom unit at Pasadena's Webster School is shown above. Note asbestos louvers over porch area.

Two classroom unit below at Pasadena's Madison School has translucent sunshade over rear windows.



too expensive by some Southern California school architects.

Van Nuys uses portables for junior high school

In Van Nuys, an SM editor conducted a tape-recorded interview with Ben Wetzel, principal of the Robert Fulton junior high school. We have reproduced below only those parts of the interview which cover points not reported in detail elsewhere in this article.

Q. A junior high school situation is considerably different from an elementary school, Mr. Wetzel. How do you find these portables work in your school?

WETZEL: Because of the size of our campus, we lack passageways between the portables and the other buildings. This makes it necessary for youngsters to walk out in the rain on bad days.

Q. What about heat when the weather is cool?

WETZEL: All of the classrooms have heat. We've had no difficulty whatsoever. One of the latest model heaters we have installed is a cooling-heating type of equipment. One of our problems out here has been too much heat. In fact, I would go so far as to say that we need cooling as much as heating.

Q. In your opinion, though you're not a building expert, would you say that you would be willing to use one of these portable bungalows in the colder Eastern climate?

WETZEL: I think they would work

out satisfactorily. It might be wise to put more insulation in the walls. In our portables we have insulation in the ceiling, but I am not certain about the walls.

Q. In your two-classroom portable, is the same heating unit used for both rooms—or is there a separate heater for each room?

WETZEL: We have a separate heater in each room. Incidentally, the teacher can control it. That's important. We have need for heat for only about half the school year. But teachers feel differently about what's "warm" and what's cool.

Q. Speaking of the teachers, how do they feel about working in these portable units? Do the teachers in the portables feel that they are step-children as compared to those in the permanent buildings?

WETZEL: I have never heard one critical comment. In fact, when this permanent building was built [two story concrete and steel structure] we were operating out of the temporary classrooms. In order to be fair, we asked teachers to put down their choice as to where they would like to teach. We did not have enough volunteers to fill this new modern plant from our regular staff.

Q. How do you account for it?

WETZEL: In general, teachers like portables and permanent bungalows not only for the feeling of freedom they get, but also because the whole place is more relaxed. In a two- or three-story school, with kids stacked up above you, the

whole place vibrates, especially when the bell rings and they start to pound through the halls. Even during class, you are always conscious of your neighbors. These portables allow a freer flow of children, eliminate tensions, and create a better-functioning school if you have adequate feeding facilities, assembly area, arcades and storage space.

Q. How many classrooms do you have in a portable structure?

WETZEL: It depends on the activity involved. Usually there are two classrooms, but in some of the portables we have three. A typical academic classroom can handle up to 40 kids, but we usually have 35. For general science, we have two classrooms per building. Before the permanent structure went up, we had two gym bungalows and they were constructed with a small office at one end and a large room for physical education at the other.

Q. Wouldn't you tend to get a lot of vibration in a structure of that type when it is used for physical education?

WETZEL: We don't have any trouble with vibration. It is mandatory that these buildings be well constructed. Here is a case in point: We run after-school dances once a week. We've had youngsters in a portable as thick as you could possibly put them. With the kids jumping about doing their "bop" there were some vibrations, but the buildings held together. Certainly, there is no safety problem. **End**

SM

PRESS RELEASES

News from the business firms serving your schools

Portable basket fits all age groups

School play yards can now add a portable basketball goal adjustable to meet the needs of all age groups. It can be used either with or without a backboard.

The all-steel unit, called the Adjustagoal, is manufactured by Sta-Rite Manufacturing Co., Bucyrus, O. Light enough to be easily moved, it cannot be upset by a thrown ball, the maker says. A semi-permanent installation can be effected with the use of metal stakes supplied with the device.

To suit varying age groups, the ring height can be adjusted to 6 ft. 8 in., 8 ft. 4 in., or the standard 10 ft.

For more information circle number 795 on the Reader Service Card.

bandwidth is flat to 8 mc ± 2 db. The aluminized kinescope tubes in the 14-, 17- and 21-inch units have 70° deflection systems, and the 24- and 27-inch have 90° systems.

In both cabinet and rack mounted versions, the monitors are designed for continuous duty operation with mini-



mum maintenance. The covers or front panels of each unit can be removed for ease in cleaning the picture tube face and safety glass, as well as for servicing.

The 17-inch model features a lightweight, wrap-around aluminum housing and a 5° front panel tilt to reduce glare and reflection. Its construction permits removal of the kinescope tube without disturbing the chassis. Operating controls are recessed for protection behind a hinged panel located below the screen.

For more information circle number 793 on the Reader Service Card.

Flexible system hoses varied areas

A portable sprinkler system, designed for areas too large to be watered by conventional single sprinklers, is being manufactured by the Hiller Engineering Co., San Jose, Calif.

The Wheel-Trac systems come in 20-, 40- or 60-ft. lengths and consist of two, four or six 10-ft. sections of aluminum pipe, together with rubber wheeled swivel dollies. Pipe and dolly sections are readily connected to meet individual area needs, and a special rubber pressure seal prevents leakage at connecting points.

For more information circle number 796 on the Reader Service Card.

New TV monitors for continuous operation

A new line of video monitors incorporating a number of advanced features is available from General Precision Laboratory, Inc., Pleasantville, N. Y. The units provide bright, clear, high definition pictures for institutional television picture presentation with GPL or other closed-circuit systems.

Horizontal resolution of all models is in excess of 600 lines, while video

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(For more information, see opposite page)



WELDWOOD BIRCH PANELING for walls and built-ins and Weldwood Chalkboard (right). Westover Elementary School, Stamford, Conn. Architect: William F. R. Ballard.

How wood paneling makes schools brighter—keeps the tax load lighter

In schools like Stamford's Westover Elementary (above) learning comes a little more pleasantly for the youngsters these days. Yet the taxpayers will save money. Here's why.

The school's planners used Weldwood real wood paneling on walls and built-ins. The reasons: 1. Weldwood Paneling cheers up any room. 2. It pays for itself by keeping maintenance costs low. Smudges and stains are easily removed and there's no need for periodic repainting and repapering.

Weldwood Paneling, in types to meet virtually every decorating plan, is guaranteed for the life of the building. Like Weldwood Chalkboard and Kalistron wall covering (see below) it can bring long-range savings to your school building or remodeling plans.

WELDWOOD FIRE DOORS with African Mahogany faces, in the Slosberg Music Center, Brandeis University, Waltham, Mass., stop transmission of destructive, suffocating heat as well as fire itself. Doors are guaranteed never to warp, twist, or get out of line, thanks to inert, incombustible Weldrok® mineral core. Architects: Harrison & Abramovitz.

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